

THE
CHICAGO MEDICAL EXAMINER.

N. S. DAVIS, M.D., EDITOR.

VOL. V.

OCTOBER, 1864.

NO. 10.

Original Contributions.

ARTICLE XXXIV.

OBSERVATIONS ON PUERPERAL FEVER.

By DELASKIE MILLER, M.D., of Chicago.

Being a portion of the Report of the Committee on Obstetrics, read to the Illinois State Medical Society. May, 1864.

The prevalence of *Puerperal Fever* in certain localities within the State during the past year—the diversity of opinions entertained by the profession upon the nature of the disease—its communicability and its treatment, are reasons sufficient for making at least a brief allusion to it, in the report of your Standing Committee on Obstetrics.

More than ordinary interest attaches to the history of this disease, from the fatality which has attended its prevalence wherever it has appeared in an epidemic form, and the antagonistic views which have been entertained in regard it. And yet these reasons would not justify your Committee in occupying the time of this meeting, with considerations relating to it, if the leading minds in the profession were, at the present day, agreed or nearly in harmony in regard to two important points, viz.: its communicability from the attendant or others, to the parturient, and upon the most successful plan of treatment. But, unfortunately, upon these points the most opposite opinions are still held and taught by medical men.

The terms employed to characterize the disease, as it has prevailed at different times and places, give us some idea of its severity, such as "fatal malady"—"terrible"—its name is "a word of fear"—"appalling," &c., and the statistics which have descended to us, prove that these phrases were not the expressions of a poetical fancy. "While mortality in London is about 1 in 150, and in Lying-in Hospitals varies from 1 in 70 to 1 in 100, the mortality in the Hotel Dieu and in the Maternite was 1 in 20, sometimes 1 in 13, chiefly caused by puerperal fever. The mortality in the great Vienna Hospital was as high as 1 in 10, and even 1 in 6."

In London, in 1761, the mortality was so great that in some of the smaller Lying-in Hospitals, they buried two women in one coffin to conceal their loss. The course of the disease was similar in most other cities of Great Britain and the Continent; the statistics of which would be out of place here, by taking too much space, without elucidating any practical principles.

A more interesting, and possibly useful, object would be attained by passing in hasty review, the diverse opinions which have at different times been entertained of its nature, and the various modes of treatment which have been adopted therefrom.

STROTHER, in 1716, was the first to apply the epithet "*Puerperal Fever*" to this disease, but there is reason to doubt whether he entertained more correct or definite ideas of the nature of the disease, than had his predecessors, who under the general term "*Child-bed Fever*," were in the habit of referring to most of the diseases of the puerperal state.

The disease broke out as an epidemic in Paris, in 1746; and at the Hotel Dieu it prevailed with such fatality, that it is asserted scarcely any recovered, and from this time we may date our first reliable history of it. MALOUIN has given an accurate and faithful account of this epidemic. TENON's description, given many years later, states that the disease had become naturalized, for from 1774 to 1816, seven out of every twelve women delivered were seized with the disease.

Among the earliest accounts of the treatment adopted in the disease, we find that of DOULCET, who relied entirely on emetics,

and it is affirmed saved several patients, and upon this he supposed that he had discovered the specific. This is not the only instance in the history of medicine in which subsequent experience has failed to sustain the claims of discoverers.

In 1768, DENMAN advised depletion on the first onset of the attack, and tartar emetic to cause vomiting afterwards.

Dr. HULME, in 1772, claimed the honor of discovering the cause of puerperal fever. He considered inflammation and gangrene of the omentum, as the essential disease, with some deterioration of the blood. He observes, "But the most capital of all remains, I mean, to cut off the purulent fomes, the chief cause of the disease, and to restore the tainted omentum and intestines to somewhat of their perfect state."

Dr. GORDON, of Aberdeen, in 1792, believed the disease to be an inflammation, but of the erysipelatous type. He advocated strongly bold and early depletion, 20 or 24 oz. at once, and if necessary 10 more soon after. "When I took away," he says, "only 10 or 12 $\bar{3}$ of blood from my patient, *she always died*—but when bled freely she never failed to recover."

Mr. HEY, in 1812, resorted to active purgatives, but these proving unavailing, he was induced to resort to Dr. GORDON's plan, taking frequently from 30 to 40 oz. and even 50 oz. of blood, and it is affirmed with good success.

Dr. ARMSTRONG, in 1819, also followed the depleting plan, by venesection and calomel purges.

Dr. GOOCH relied on venesection, leeching, and cathartics.

In 1823, Dr. COPELAND was in charge of Queen Charlotte's Hospital during the prevalence of puerperal fever, and from the failure of the systems of treatment then in vogue, he adopted a *stimulating* plan. On the first appearance of the symptoms of the malady, he administered from 8 to 16 grs. of camphor, combined with from 10 to 20 grs. of calomel, and from 1 to 3 grs. of opium, and repeated this every 4, 5, or 6 hours. Soon after the second dose of the medicine had been taken, half an ounce of spirits of turpentine, with castor oil, was administered, the stimulant and anodyne being still continued, and counter

irritants applied to the abdomen. The success of this course, he assures us, in the malignant form, was almost complete.

Without intending to elaborate the subject in all its phases, three topics will claim attention at the present time. The nature—the communicability—the treatment.

What is the nature of *Puerperal Fever*? Here we meet a most important question, for not only the treatment of the disease, but in numerous instances, the immunity of the patient from the disease, will depend upon the views which the physician may entertain. Is the disease essentially a phlegmasia? Changes are frequently met with in *post mortem* examinations, in some one part of the system or another, having the semblance of the results of inflammation, but they are not uniform in their location or appearance, and they are sometimes absent altogether, no one of which being constant. If the disease depends upon inflammation in some organ, of course, when the local inflammation is *absent*, the puerperal fever cannot be *present*.

The testimony of those who have had the largest experience in treating this disease, and the best opportunities to observe its effects upon the system concur, in one particular, viz.: that cases are met with in which no morbid appearances can be found in the tissues after death. Then common inflammation is not essential to the existence of the disease.

The disease may run its course with such rapidity as to destroy the patient in a few hours, like ARMSTRONG'S "congestive disease," and MACKINTOSH'S "latent peritonitis," but do not terms like these deceive the observer? by leading him to suppose that he comprehends the case, while he remains innocent of the slightest idea of the true nature of the malady; are we not sustained in this supposition by what has been already collated? What could be more opposite than the depletion of GORDON, HEY, and ARMSTRONG, and the stimulation of COPELAND, each claiming to treat the same disease.

The fallacy consists in not recognizing a new element in puerperal fever, not found in ordinary inflammation, which renders its nature essentially different from peritonitis, phlebitis, metritis, &c., &c. The new element, we are led to believe, is

a poison in the blood, producing its septic influence there—and through this medium producing changes sometimes in the tissues of important organs. That the disease is truly zymotic. Its history observes the laws of all poisons.

1st. It is an uniform disease; the description given of it an hundred years ago, describes the disease of to-day equally well.

2d. It selects a tissue for its seat, viz.:—the serous membranes and tissues analagous to them.

3d. The definite action is in the blood, the quantity of fibrine is increased, its quality is deteriorated.

4th. The action of the poison is modified by the quantity introduced into the circulation. When it is in excess the patient may die suddenly, without leaving any local manifestations of its presence. I am familiar with Dr. A. CLARK's observations in regard to the valves at the extremities of the uterine sinuses, and the appearances of inflammation there in puerperal fever. But these appearances have not always been detected by other observers. When the poison is in less quantity its course is less rapid, and is followed by local changes.

By this view we are enabled to account for the diversity of opinions which have been promulgated of the nature of the disease. When partial or erroneous views are entertained of a disease, the observer will note the appearance in the individual case as representative of the class, and the account will therefore vary with each case examined, whereas, if the disease depends upon a *matres morbi* in the blood, accidental causes may determine in which organ, if any, the local changes are to be found.

It would be interesting to trace this poison to its source, and describe in detail the mode of its communication, but we can do little more than state conclusions.

1st. It may originate within the system, from the decomposition of organic matter.

2d. It may be introduced from without, by exposure to diseases characterized by ichoræmia, or,

3d. It may be communicated by the attendant, who is the vehicle of transportation from a distant case.

Notwithstanding evidence as irrefragible as can be produced, to prove the contagiousness of any disease, is abundant upon this, still it has been maintained in a most positive manner that *puerperal fever* is not communicated thus, and this position is defended by rare eloquence, and a personal experience of many years is referred to, as confirmatory of the position.

Suppose a physician in extensive practice is frequently called in consultation in cases of *puerperal fever*, and has not communicated the disease to his patients, what does it prove? Merely that a contagious disease is not necessarily taken by exposure. This is not peculiar to *puerperal fever*, for then would the prevalence of scarlatina, measles, small-pox, &c., rapidly become general upon the breaking out of the disease. No system could resist the power of the contagion; but what physician, that has practiced for any considerable time, has not known some of these diseases to affect a single member of a family, while all the others escaped. A single case coming within the knowledge of the reporter will be detailed briefly, as representative of many similar ones that might be collated from other sources.

A physician had been engaged to attend a lady in her first confinement, whose gestation had been remarkably free from every annoying symptom; she was educated, and refined in manners, and occupied a position in society, that would induce any physician to be vigilant that no accident should occur, to compromise her recovery.

This physician was called in consultation to deliver a placenta which had been retained, a long time after the birth of the child. Without much difficulty the decomposing and fetid placenta was removed; the hands and arm of the operator washed in soap and water with care; still the noxious odor adhered to the surface most tenaciously. In the night following, this physician was called to attend the lady referred to. The labor was perfectly natural, and by no means severe, but in twenty hours from the time of delivery, she was attacked by a severe chill, followed by high febrile movement in the system—tenderness of the abdomen—tympanites, and arrest of the lochia; and although treatment was commenced promptly to arrest the pro-

gress of the case, the effort was unavailing, for the patient died on the second day after the chill.

This patient was perfectly healthy; no accident occurred during or subsequent to labor, to account for the attack, yet she died of puerperal fever. Did not that physician have reason to feel that he had communicated the poison to his patient which caused her death? If this were a solitary instance, he might not censure himself, but when we remember that many cases are on record, similar, in every essential particular, the case is quite different.

How is the contagion communicated? through the atmosphere from patients affected with puerperal fever, erysipelas-gangrene, &c.; by the clothing; from the surface of the body; by the breath of the attendant. That the disease is communicable in the manner indicated, your Committee entertain not the slightest doubt; and they feel called upon to state emphatically their convictions, more especially as medical works written in a most fascinating style, inculcate an opposite view.

This leads to the conclusion that preventive means are never to be lost sight of by any one engaged in obstetric practice. The danger of communicating the disease should at once suggest the impropriety of placing parturient females contiguous to any of the diseases which we have indicated, as liable to communicate puerperal fever. A recognition of this principle would render the propriety of constructing large lying-in hospitals, or appropriating extensive wards to the reception of lying-in women, more than problematical. During the time of the writer's visit to Edinburgh, last fall, which was one of great interest, puerperal fever was prevailing there, and whenever it makes its appearance, as it frequently does, in the Royal Infirmary, it is of sufficient gravity to give rise to the greatest anxiety in the minds of the accomplished and skilful physicians having charge of the institution, and we could but feel that a lying-in woman, in a cabin, with barely the necessaries for the emergency, might well be envied by the occupant of a large ward, when the disease is prevailing.

Then what is the duty of the physician, in private practice,

during an epidemic of the disease? If engaged at all in obstetric practice, manifestly to relinquish all cases of a zymotic nature, and should the disease appear in his patient, to decline further calls of that nature. A physician is not at liberty to expose the unsuspecting to the danger of this disease, and it is difficult to understand, how those who disregard these principles, can satisfy their consciences while violating these conditions.

It is not our intention to prolong this report, by a criticism on the various modes of treatment, which have from time to time been recommended, further than to raise the question of the propriety of abstracting large quantities of blood in the treatment of puerperal fever. Can a disease be removed from the system by venesection, when the whole volume of blood is affected, and has the power of reproducing itself? If we believe this disease belongs to the class of zymotics, the answer is unhesitatingly, no. Nor shall we detail minutely the plan of treatment which has, under our observation, been most successful. We can at most give only an outline sketch, nor would more than this be desirable at the present time. The plan may be indicated under three heads, viz.:—

1st. Neutralize the *matres morbi* in the system, in the uterus, and in the vagina.

2d. To eliminate the disintegrating and effete materials from the system.

3d. To support the vital forces of the system.

The most efficient agents for fulfilling the first indication yet brought into requisition, we believe to be *chlorine* and *bromine*. The former we have already used sufficiently to enable us to speak with confidence of its good effects. In regard to the latter, from a limited experience with it, we are led to hope for the most satisfactory results. These remedies are valuable in every stage of the disease, and especially indicated when the discharges are profuse or offensive. Locally, they may be applied in solution or used in the form of vapor. Applied in either form they are efficient in proportion to the completeness with which they come in contact with the source and seat of the disease. They are to be introduced not only into the *vagina*, but

also into the cavity of the *uterus*. We are far from advising a reckless system of intra uterine injections, but introduced with proper precautions, experience in a few cases, has proved them to be not only harmless but highly efficient agents. The mode proposed is, first to wash away all offensive discharges, at least as completely as practicable, then convey the remedy, properly diluted, to the part, gently through a suitable tube. If vapor be used it may be conveyed to the part by the same apparatus.

The use of chlorine in this disease is not new. It has been demonstrated to be, in this and other diseases, not only a deodorizer but a valuable disinfectant.

The local use of bromine in the treatment of puerperal fever was suggested from its acknowledged value as a remedy in erysipelas hospital gangrene, &c.

The *second indication* can best be fulfilled by the use of remedies, believed to possess the power of preventing or arresting the septic influence of the poison, already circulating with the blood, such as the mineral acids—chlorine salts—the bromides—the sulphites of lime and soda, &c.

To effect the third object, anodynes hold an important place, not only to relieve pain and irritation, but in full doses to arrest the rapid tissue metamorphoses that would take place without their use; with these tonics are indispensable, but several of the most powerful tonics have been already indicated to fulfil the second indication; nutritious diet is indispensable, and in many cases stimulants cannot be dispensed with.

Thus far it has been our object,

1st. To bring into immediate contrast, the diverse views which have been entertained of the nature and treatment of this disease.

2d. To express our belief that it is essentially zymotic in its nature.

3d. That it is communicable by the attendant as well as by other means, and

4th. To direct attention especially to the value of *Chlorine* and *Bromine*, not only in limiting the spread of the disease but also as curative agents.

ARTICLE XXXV.

CASE OF HEPATIC DISEASE.

By D. B. TRIMBLE, M.D., Chicago, Ill.

EDITOR MEDICAL EXAMINER:

DEAR SIR:—If you think the following case, from my note book, will be of sufficient interest for insertion in your journal, it is at your service.

It is a case shewing the beneficial effects of free ptyalism in severe hepatic and gastric derangement; and of the recuperative powers of cod liver oil. In addition to its valuable influence in pulmonary affections, the excellent tonic and restorative qualities of the oil in cases of emaciation and debility from other causes, I have witnessed in a number of instances, of which the following case is one:—

I was sent for on the evening of April 3, 1859, to see a person, some miles from my residence, who was said to be "dying." I found the patient, Mrs. R., aged about thirty years, affected as follows: Intense pain and tenderness in the abdomen, particularly in the epigastrium; a circumscribed swelling in the upper part of the right iliac region; obstinate constipation; a weak, fluttering, and frequent pulse; tongue dry, and coated with a dark-brown fur; skin, and albuginea oculi, of a deep icterode hue; emaciation equal to that of a person in the last stage of phthisis; complete anorexia; and suppression of catamenia since preceding May.

The history of her case, as given me by herself, and afterwards confirmed by a conversation I had with her first physician, a gentleman of intelligence and experience, was, that she was taken sick early in May, 1858, and on the 25th of that month had a severe chill, when she first sent for her physician. The ague continued for a "considerable" time; she continued to grow worse, and suffered great pain in the epigastric and right hypochondriac regions, increasing paroxysmally, but never entirely intermitting. Her disease progressed; she became

very prostrate, and greatly emaciated, and a consultation with an eminent practitioner was held, who concurred in the view of the attending physician, that it was a severe case of biliary calculi. The measures resorted to, partially and temporarily relieved the sufferings of the patient; but the emaciation continued and increased, and after a time the symptoms were renewed with greater severity. Her physicians then said they could do no more for her, and her husband called in another. The last practitioner attended her a few times, without apparent benefit, and then discontinued his visits; several weeks elapsed when they sent for me under the impression that she was dying.

After a thorough examination, I supposed it to be a case of chronic inflammation and induration of the liver, in which the stomach and bowels had become implicated. The severe paroxysms of pain, I supposed, might (as decided by the two gentlemen who first attended her,) arise from the passage of biliary calculi through the cystic duct, and ductus communis choledochus; and the irritation thus produced, combined with malarial influence, was no doubt the cause of her disease.

The immediate indications were, to allay the suffering, support the strength, and procure sleep; and I therefore prescribed mild stimulants and anodynes, Dovers powder, with wine-whey, and light liquid nourishment was my first prescription. The next day I found she had had a better night than usual; and I then directed 12 grains pill. hydrarg., to be followed by ol. ricini in five hours. As the case was almost a hopeless one, and believing that the liver must be brought into greater and healthier action, and the attending irritation of the stomach and bowels, be relieved to give any chance for a cure. I determined to push the mercurial treatment to ptyalism; supporting the strength at the same time, by as much nutriment of a proper character as the patient would bear. I therefore continued the pill. hydrarg., alternating with p. ipec. et opii., and applying ung. hydrarg. to right hypochondrium. In connection with this course I also administered taraxacum.

About this time the patient had a convulsion, and remained insensible for 18 or 20 hours. I did not see her while in this

condition; her friends supposed her to be dying, and did not send for me. In a few days the breath and gums began to give evidence of the mercurial influence, and twenty-four hours after these symptoms appeared, I suspended the medicines, except the taraxacum. The salivation increased, and became severe; gave her beef tea, wine-whey, &c.; astringent gargles, and small doses of sol. sulph. morphia, for a few days to allay the abdominal pain, which had, however, greatly abated on the appearance of ptyalism. The bowels were now moved copiously, two or three times a day, without other medicine than a dose of castor oil once in two or three days. The feces were dark, and of a tar-like consistence, gradually becoming more natural in appearance; the jaundiced color of the skin and eyes abated; the eyes had a more animated appearance, and the appetite rather better. The pulse became slower, and more regular, and the pain had nearly subsided.

I now commenced giving her half an ounce cod liver oil, with comp. tinc. cinch. twice a day; and she soon evinced the benefit she was deriving from it. The jaundiced hue of the skin and eyes disappeared; her appetite became urgent, so that it was necessary to restrain it; bowels were regular; pain relieved; her flesh and strength rapidly increased, and on the 20th May, I ceased attending her, with directions that the oil should be continued two weeks longer. I called to see her about the middle of June, but she was not at home. Her mother said "she was well, but swollen in the abdomen." On the 19th of July, I called again, and found her at her work, perfectly restored to health, and with quite sufficient flesh. Her catamenia had returned the week previous, the first time for 18 months, and the abdominal tumefaction had subsided.

I think the effects of the treatment in this case so evident, that there is little necessity for comment. That the salivation relieved the engorged and irritated condition of the liver, and the torpid state of the alimentary canal, there can be no doubt; and the system being thus relieved, the cod liver oil aided materially in her rapid restoration to health.

Chicago, August 17, 1864.

ARTICLE XXXVI.

REPORT OF THE COMMITTEE ON SURGERY.

By E. ANDREWS, M.D., Professor of Surgery in Chicago Medical College.

Presented to the Illinois State Medical Society. May, 1864.

MILITARY SURGERY.

A considerable body of statistics has been accumulated by us since our last report, and we have condensed them for this report into tabular form.

The following list of cases, treated within the bounds of this State, was derived from the records of Mound City Hospital, under the care of that superior officer, Dr. H. WARDNER, Surgeon U. S. Vols. The labor of arranging and preparing this list was performed by Dr. M. BLOCK, a most valuable and enterprising Assistant-Surgeon, of the same Hospital:—

Name of Patient.	Date of Injury.	Nature of Injuries.	Adm. to Hospital.	General Treatment.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrument.	Direction of Wounds, &c.	Remarks.
CASE No. 1. Serg. G. F. Wallin, Co. I, 7th Iowa.	Nov. 7, 1861.	Fracture of the humerus.		Splint of binder's board bandages and cold water dressings.		Jan'y, 22, '62.		Minnie ball.	Ball passed through the inner margin of the biceps, anterior to brachial artery, fracturing the humerus and emerging at the insertion of the deltoid.	One large spicula and several small pieces of bone discharged, after suppurating had commenced.
CASE No. 2. W. M. Kennedy, private Co. A, 7th Iowa.	"	Wounds of bones of the tarsus.		Foot supported by splints and bandages, dressings of cold water and arnica.	Feb'y, 20, '62.			Musket ball.	Struck the outer malleolus, passed between the os calcis and astragalus, emerging at the inner malleolus.	Great suppurating; disch'd almost well, but walking on crutches, on account of weakness of the injured foot.

Name of Patient.	Date of Injury.	Nature of Injuries.	Adm. to Hosp't.	General Treatm't.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrum't.	Direction of Wounds, &c.	Remarks.
CASE No. 3. John Walga muth, private Co. D, 7th Iowa.	Nov. 7, 1861.	Fracture of the ulna & humerus, (left side)	Nov'r 13, '61.	Splints; band-ages and cold water dress-ings, tonics and stimulants in-ternally.	Feb'y 20, '62.			Musket ball.	Struck the fore-arm about 2 inch. below elbow-joint, fracturing the ulna, passed through the joint, splitting and fracturing lower end of the humerus, and emerg-ed about 4 in. above joint, front side of arm.	Suppuration extensive; sufferings very great; cure perfect, save an-chylosis of the joint.
CASE No. 4. Leander Ritchie, Co. B, 7th Iowa.	"	Injury of scapulae, [coracoid process & subscap-ular fossa.]	"	Cold water and arnica dress-ings; perfect rest.	Jan'y 22, '62.				Struck about the middle of the coracoid process, pass-ed under the subscapularis muscle, denuding the bone at this point of its periosteum, emerging below and near the inferior angle of the scapula.	Inflammation and sup-puration extensive; cure perfect.
CASE No. 5. Jas. R. Howard, private Co. B, 7th Iowa.	Nov. 7, 1861.	Fracture of the humerus; amputa-tion of arm; two sec'dary hemor-rhages.	Nov'r 13, '61.	Simple dressing at first; incis'n in two aneuris-mal culs desac, on 3d Dec, one on brachial, an-other on axil-lary artery, fol-lowed by stim-ulating injec-tions.	Mar. 6, 1862.			Musket ball.	Unknown; the patient be-ing left on the field, was captured by the rebels, & while in their hands the limb was amputated.	Discharge of 2oz. of san-guinous matter on 24th Nov'r.; considerable hemorrhage on 2d of Dec.; incisions made on the 3d (see general treatment.) Tumor formed on dorsum of scapula, Jan. 30th, dis-charging matter for 2 weeks; cure perfect.
CASE No. 6. Patrick Welsh, private Co. K, 22d Ill. Inf'y.	"	Wound of the thigh with di-midation of peri-os-	Nov'r 12, '61.	Bandages, cold water dress-ings, tonics, stimu-lants, and gen-eral diet.			Jan. 1, 1862.	Minnie ball.	Ball entered the outer side of left thigh, near junction of upper and middle third; another entered same leg 2 inch. below knee-joint;	Suppuration involving muscles of thigh and leg; extremely offen-sive; on post mortem examina'n, entire dis-

private Co. F., 22d Ill. Inf'y. lants, and gen- erous diet. 2 inch. below knee-joint;] examina n, entire sur-

Case No. 7. J. M. Hammit, Serg. Co. F, 7th Iowa.	Fracture of femur (middle third.)	Nov'r. 13, '61.	Cold water and arnica dress- ing; extension and box spl'ts.	March 22, '62.	Minnie ball.	neither ball could be found with the probe.	organization of soft parts and inundation of periosteum of fe- mur was discovered. A first emollient to 3 times its natural size; 15 days after, secondary hemor- rhage from a branch of profunda artery, with con- siderable loss of blood, ar- rested by tourniquet, and ice water; suppuration extensive for 3 months; several apiculae of bone discharged; cured; short- ening half an inch; bone united March 11th.
Case No. 8. Jas. M. B. Gas- ton, private Co. C. 22d Ill. In- fantry.	Flesh wound of the thigh with slight in- jury to the femur	"	Cold water dress- ing.	Fur- lough- ed Jan. 22, '62.	Minnie ball.	Entered left thigh, about 1 inch anterior and above the external condyle of femur, emerging through tendon of rectus femoris muscle.	Extensive suppuration leading to fear of se- rious injury to bone.
Case No. 9. David Clammer, Serg. Co. C, 2d Iowa Infantry.	Fracture of femur, upper 3d.	"	Extension splint and simple dressing.	Jan. 22, '62.	Musket ball.	Ball entered about 3 inches below the trochanter ma- jar through sartorius mus- cle, fracturing the bone and emerging on the op- posite side. (?)	Suppuration very copi- ous.
Case No. 10. John R. Kell, Serg. Co. G, 22d Ill. Infantry.	Fracture of the occipital bone. trephin'd	"	Depressed bones removed by tre- phine, serrated edges trimmed, and flaps dr'wn together by sil- ver sutures.	Fur- lough- ed Jan. 22, '62.	Ball (?)	Ball struck and broke the occip. bone, about 1 inch to the right of lateral sinus.	Both plates of the bone were depressed and a spicula of the inner plate driven into the substance of the brain. The patient has since been discharged on ac- count of epilepsy, to which he had not been subject before.

Name of Patient.	Date of Injury.	Nature of Injuries.	Adm. to Hosp'l.	General Treatm't.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrum't.	Direction of Wounds, &c.	Remarks.
CASE No. 11. Chas. Koch, private Co. G, 22d Ill. Infantry.	Nov. 7, 1861.	Flesh wound of thigh, injuring the femur (middle third.)	Nov. 13, '61.	Cold water dressing and poultices.	Aug't. 27, '62.			Minnie ball.	Ball entered right thigh on outer side and middle 3d, passed under the femur, denuding it of periosteum, and was lost in the muscular substance.	Suppuration very copious but never disagreeable; when rec'd into Hospital the patient's clothes had not been changed or his wound dressed; leg somewhat painful, causing patient to walk lame when discharged.
CASE No. 12. John Morgan, Co. (?)	"	Flesh wound of thigh, lower 3d.	"	Cold water dressing, milk-punch—general diet, &c.				Musket ball.	Ball entered thigh, on the outer side, 4 in. above the patella, passing between vasti and rectus muscles, emerging from the opposite side, 1 inch above point of entrance.	Suppuration very great; cure perfect.
CASE No. 13. E. M. McCarty, ord. serg. Co. C, 22d Ill. Inf'y.	"	Flesh wounds of both thighs.	"	Cold water and arnica dressing.		Furlo' Jan. 22, '62.		Musket ball.	Ball entered the outer side of right thigh, 4 in. below perineum, passing through both thighs, behind femur.	Suppuration very extensive; both wounds nearly healed, Jan. 22, '62; returned to reg't. as 2d lieutenant, but was obliged to resign, on acc't of weakness of both limbs.
CASE No. 14. Wm. Miller, (?)		Flesh wound in the back.	"	"				Rifleball.	Ball entered a little external to the middle portion of the axillary border of scapula, passing through the teres major, downwards & across, through the trapezius, and was extracted near the 1st lumber vertebra.	Great suppuration; recovery perfect.
CASE No. 15. Charles Wilbert, priv. Co. B, 7th Iowa Infantry.	"	Flesh wound of the thigh, upper 3d.	"	"		Jan'y. 22, '62.		Minnie ball.	Ball entered the thigh opposite the trochanter major, passed down the side of femur, and was lost in the muscular substance.	Suppuration extensive.
CASE No. 16. Mathias O'Brien, Co. E, 7th Iowa Infantry.	"	Flesh wounds of nates, making 4 holes.	"	"	Feb'y. 15, '62.			Ball.	Ball passed through the nates, from right to left.	Speedy convalescence; cure perfect.

CASE No. 17. L. Van Hoosen, priv. Co. D, 7th Iowa Infantry.	"	Flesh wounds of both thighs; upper 3d	"	Cold water and arnica dressing.	Jan'y 1, '62.	Ball passed in a direct line through both thighs at the lower end of upper third, posterior to the femur.	Cure perfect, save a slight contraction of the flexor muscles of both legs.
CASE No. 18. Wm. Eshmeil.	"	Flesh wound of foot.	"	"		Ball entered near and un- der the middle of the 1st metatarsal bone of right foot, passing under the deep fascia, and made its exit through lower end of tendo achillis.	Cure perfect.
CASE No. 19. Ab't Hie, priv. Co. C, 7th Iowa Infantry.	"	Wound of right lung.	"	Compresses, ban- dages and cold water dressing, tonics and stim- ulants.	Nov'r. 24, '61.	Ball (?) Ball entered 3 inches below right scapula, grazing the spine, passing through the body, emerging about 3 in. below and to the right of right nipple.	Suppuration very great, pus dark, watery and offensive; air passed through both orifices of wounds when un- dressed.
CASE No. 20. D. Wallis, priv. Co. E, 7th Iowa Infantry.	"	Wound of left lung.	"	Aconite, pulv. Dov. and cam- phir; generous diet and simple dressings.	Feb'ry 20, '62.	Ball entered 1 inch from outer margin of left scapu- la, passed in thoracic cavi- ty, wounding left lung.	Expectoration of blood during 4 days; com- pletely arrested on the 6th; cure in 7 weeks.
CASE No. 21. Wm. L. Wood, priv. Co. H, 7th Iowa Infantry.	"	Wound of right lung.	"	"	Dec'r. 1, '61.	Minnie ball. Ball passed through the right scapula into the tho- racic cavity, through up- per lobe of right lung; emerged between 4th and 5th ribs, fracturing the 4th	Pulse 120; breathing short and quick; ex- pectorations bloody.

Name of Patient.	Date of Injury.	Nature of Injuries.	Adm. to Hosp'l.	General Treatment.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrument.	Direction of Wounds, &c.	Remarks.
CASE No. 22. Chas. Hoffman, priv. Co. K, 7th Ill. Inf'y. 14, '62. (17 years of age.)	At Fort Don't. of tibia and fibula. Feb'y. 14, '62.	Fracture of tibia and fibula.		Primary & secondary amputation of leg.	March 15, '62.			Musket ball.	Unknown; amputation having been performed on the limb improve daily; recovery perfect.	After the 2d operation the appearance of the limb improve daily; recovery perfect.
CASE No. 23. Wm. Casey, Co. K, 1st Mo. Art.	"	Fracture of fibula with de- struction of calf of leg.	Feb'y. 21, '62.	Bandages, tonics, stimulants, &c.			Feb'y. 28, '62.	Shell.	Shell carried away the greatest part of the calf, and fracturing the fibula by concussion.	Constitutional irritation extreme; patient died of traumatic tetanus.
CASE No. 24. Geo. Smith, sea- man, Gunboat Pittsburg.	"	Wound of back.	Feb'y. 21, '62.	Emollient poultice on wound; ed parts; tonics, stimulants, &c.			March 20, '62.	Piece of iron, st'v- pipe.	Two wounds near posterior margin of axilla extending upwards one inch beneath the skin for about 2 inches.	12 hours after his admission to the hospital the missile was removed; sero-purulent discharges, on admission, and the parts highly tumefied and painful.
CASE No. 25. W. Cool Russel, Co. E, 9th Ill. Inf'y, (aged 17 years.)	"	Fracture of occipital bone.		Trephined, and detached and depressed portions of bone removed.	March			Minnie ball.	Ball struck the occipital bone near its junction with the left parietal, depressing both plates.	When rec'd in hospital, his pulse was 65; 24 hours after operation breathing was natural, recovery rapid & good.
CASE No. 26. Dennis Bryan, Co. I, 18th Ill. Infantry.	"	Fracture of inferi- or maxil- lary bone		Resect'n of bone from symphysis to the groove for fascial artery; sutures, cold water dressing, &c.	April 28, '62.			"	Ball struck the chin, glancing and following the bone to within one inch of the angle, when it passed out, crushing the entire bone on its way.	Wound healed rapidly; and bones united by cartilage, cure perfect.

Case No. 27. Charles Mervin, seaman, gun- boat Pittsburg.	"	Fracture of frontal bone, de- pression of both plates.	Feb'y. 20, '62	The surgeon of the boat, mis- taking it for a flesh wound, treated it as such, with ad- hesive strips, &c.	Feb. 24 1862.	Shell.	Fragment of shell struck the frontal bone, about 2 inch. above right eye.	Patient w'd from boat to hosp. on the 20th; felt well until the 24th when he commenced vomiting, became de- lirious; had a stertous breathing, dilated pu- pils, &c.; died 2 hours after attack. <i>Post</i> <i>mortem</i> examination: fract' re of frontal bone depression of both plate, spicula of bone in the substance brain, both outside the dura- mater; brain disor- ganized and softened.
Case No. 28. Wm. Randolph, Co. C, 25th Ind. Infantry.	Feb'y. 15, '62.	Fracture of femur, middle 3d	"	Amputation pri- mary & second- ary, flap op- eration.	Feb. 24 1862.		Unknown; the patient's limbs having been ampu- tated on the field.	After coming in hosp. flaps retracted, sutures sloughed, expos g l in. of the bone, at the end of which an osseous formation was found; the exposed portion of bone was resected and the flaps drawn togeth'r of bone in the antrum of Excessive inflammato- ry action 4 weeks after 1st extraction, when the second portion of the ball was removed; after this the wound healed rapidly.
Case No. 29. J. Strickland, Co. D, 8th Ark. (rebel.)	"	Fracture of super- ior max- illary bone	Extraction of March ball in two halves, 6, 1862 at an interval sent to of 4 w'ks. The Camp 1st was extrac d Doug- by incision fr m las Chi- the posterior margin of the sterno - cleido muscle and the 2d from the face to the point of entrance of the ball.	Musket ball.			Ball entered the face about 1 inch below the right eye, fracturing supr. maxillary bone and driving a spicula of bone in the antrum of Excessive inflammato- ry action 4 weeks after 1st extraction, when the second portion of the ball was removed; after this the wound healed rapidly.	

Name of Patient.	Date of Injury.	Nature of Injuries.	Adm. to Hospt'l.	General Treatm't.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrum't.	Direction of Wounds, &c.	Remarks.
CASE No. 30. Michael Kelley, seaman, Gun- boat Louisville	Feb'y. 16, '62.	Flesh wound of shoulder & back.	Feb'y. wound of 21, '62.	Adhesive strips, cold calenda- ula dressing, tonics, and stimulants and rich diet.		July 4, 1862.		Fragm't of shell.	Wound extending from the middle of deltoid muscle, backwards & downwards to a point opposite the 2d dorsal vertebra.	Wound about 10 inches in length, gaping from 1 to 4 inches, laying bare left scapula and ribs, along the track. When wounded he was unaware of having re- ceived any serious injury; had to be ordered to retire. Inflammation, oedema and suppuration extensive. — Cure perfect.
CASE No. 31. Julius Schuster, 48th Ill. Inf'y.	"	Commi- nuted fr. of radius and ulna, traumatic tetanus.	"	Spicula of bones removed and limb dressed. — Chloroformed to overcome the rigidity of mus- cles, more or less for 48 hours	March 7, '62.			Minnie ball.		When adm't'd wounds look- ed well, the bones having been properly adjusted, & the patient's appetite was good. On the 24th, tetanus supervened, being ushered in by fever, closure of jaws and partial immobility of limbs and trunk, with dif- ficult deglutition. Doing well 2 weeks after the at- tack when he was furl'ed.
CASE No. 32. Geo. W. Morgan, seaman, Gun- boat Carondo- let.	"	Flesh wound of back and traumatic tetanus.	"	Wound dressed as usual. Chlo- roformed at in- tervals from 4 to 1 hour dur- ing 4 days.		March 9, '62.		Fragm't of shell.	Entered at the point of the scapula, passing upwards between this bone and the cellular tissue, making a wound three inches in length.	Doing well for 8 days, when a small piece of cloth was extracted from the wound; 4 days thereafter tetanus supervened, which contin- ued for four days, when the patient died from ex- haustion.

CASE No. 33. Stephen Burrows, 20th Ill. Infantry.	Battle of Ft. Donelson, Feb'y, 15, '62.	Fracture (?) followed by traumatic tetanus.	"	Dressings as usual. *Blisters over the whole length of spine. Strychnia, opium, & camphor.	"	Mar. 2, 1862.	(?)	Enter'd the leg, fracturing slightly the tibia, and glanced out, doing very little injury to the soft parts.	Doing well until Feb. 30, when all the symptoms of tetanus supervened, and the patient died 28 hours after the attack. The remedies employed could not arrest the progress of the disease.
CASE No. 34. R. N. Fowler, Co. A, 31st Ill. Infantry.	"	Fracture of tibia, traumatic tetanus.	"	Dressings as usual. *Chloroformed more or less for 36 hrs.	Minnie ball.			Ball entered the leg, fracturing slightly the tibia, and glanced out, doing very little injury to the soft parts.	Doing well until Feb. 29th, when symptoms of tetanus came on gradually, increase in violence. Cure perfect.
CASE No. 35. G. Arnold, capt. Pittsburg Land-secdry Ohio Vols.	Battle of Pittsburg Landing, Apr. 7, 1862.	Wound of scapula and neck secondary hemorrhage.	(?)	Simple dressing and generous diet.	Minnie ball.			Ball entered left scapula at a point opposite the third dorsal vertebra, passed obliquely upwards, lodging in inner margin of the right sternocleidomuscle, about 1 in. below pectorum adami.	Suppuration great at point of entrance, white wound at the point of exit, healed by first intention. Expectation a little bloody at first and difficulty of deglutition. Doing well April 20th. Cure perfect.
CASE No. 36. Colby Shrader, Co. I, 17th Kentucky Infantry.	"	Wound of shoulder and neck.	"	Simple dressings; tonics, stimulants, &c. Unsuccessful. Attempt by Prof. Gross to tie artery, subclavian.	Minnie ball.	April 18, '62.		Ball entered deltoid muscle about 3 in. above its insertion into humerus, passed upwards, striking inner head of that bone, then glancing inwards & backwards bet. pectoralis major and minor muscles; passed between clavicle and first rib, over track of subclavian vein, making its exit on opposite side, between scapularis anticus and rectus capitis anticus, and extending probably through subclavian artery in its passage.	Ten days after the wound was received secondary hemorrhage occurred sufficient to lead to the belief that it proceeded from the subclavian artery. An unsuccessful attempt at tying the artery was made by Professor Gross, who was at that time visiting the Hospital. A sack filled with a coagulum fully the size of a hen's egg was found resting on the plicura.

* These treatments of course, were commenced when the symptoms of tetanus were developed.

Name of Patient.	Date of Injury.	Nature of Injury.	Adm. to Hospital.	General Treatment.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrument.	Direction of Wounds, &c.	Remarks.
CASE No. 37. William Merlin, private Co. A, 41st Ill. Inf'y.	April 7, 1862.	Wound of right lung.		Simple dressings; aconite, camphor, and Dover's powder, with perf't rest.	May 7, 1862.			Minnie ball	Ball entered chest bet. 2d and 3d rib, about 1 in. to right of sternum, passed obliquely through upper lobe of right lung, then thro' pectoralis major & minor muscles, striking & fissuring the humerus; it made its exit about 1 in. above insertion of deltoid muscle.	Bloody expectoration for the first four days. Result—entire convalescence.
CASE No. 38. T. H. Simmons, lieut. Co. F, 14th Ill. Inf'y.	"	Wound of the right lung and scapula.	(?)	Simple dressings; perfect rest.	May 8, 1862.			Minnie ball.	Ball passed between 2d and 3d ribs, 2 inch. to the right of sternum, through the upper lobe of right lung and thro' the scapula.	Bloody expectoration for first 8 days after receiving injury; constitutional irritation slight; pulse 100. 11th day, pulse 80, appetite good, and symptoms favorable. May 8th, wounds closed by granulation; no pain in the chest; draws full inspirations.
CASE No. 39. A. A. Veach, private Co. I, 28th Ill. Inf'y.	April 6, '62.	Wound of left lung	(?)	"			April 19, '62.	Ball (?)	Ball entered the fourth intercostal space, 4 in. left to sternum, and emerged between 8th and 9th ribs, about 3 inches to the right of the vertebral column.	Patient, when wounded, was inclined forwards. Lung highly inflamed; respiration difficult; expectoration bloody. Bloody serum discharge from wound for 3 days, after which an exceedingly offensive, very profuse, dark-colored, thin excretion, passing down the chest, placed. Patient remained good throughout, and bowels were inclined to be constipated.

Case No. 40. G. W. Crabtree, private Co. C, 11th Ill. Inf'y.	Apr. 7, Wound of descending col'n.	(?)	Upright position, cold water dressings and saline cathartics.	June 27, '82.	Ball entered the abdomen, 3 inch. to the left of the umbilicus, passed through the body, emerging about 1 inch. to the left of the spine.	Fecal discharge from both wounds until May 2d, when the wounds healed and the bowels acted regularly; when the bowels were constipated the discharge from the wounds was profuse & attended with much pain; when the bowels were relaxed discharge was slight and the patient comfortable; cure perfect.
Case No. 41. G. W. Spalding, private Co. D, 52d Ill. Inf'y.	" Fracture of right clavicle.		Exsection of the sternal half; arnica water dressing, stimulant, generous diet, and anodynes at bedtime.	May 7, 1862.	Minnie ball. Ball struck the centre of right clavicle, shattering the bone, and became embedded under the clavicle near its sternal end.	April 19th, several spicules of bone, about $\frac{1}{2}$ of an oz. ball, and several small pieces of clothing were removed from the wound. 22d, general condition good, pulse 90; exsection performed by Surgeon Franklin; operation lasted 20 minutes, with a loss of less than 1 oz. of blood; a brass button belonging to the coat of the patient was found embedded under the bone, near the acromion process, and removed. Suppuration excessive; abscesses formed around the knee-joint; inflammation and swelling extending up to the thigh and down to the foot; cured with anchylosis of the knee-joint.
Case No. 42. Adam Sheldon, private Co. A, 43d Ill. Inf'y.	" Wound of knee-j't.		Cold water dressings and bandages after inflammation was reduced; tonics, stimulants, and generous diet.	July,	Ball passed through the patella, into the joint, where it could not be found.	

Name of Patient.	Date of Injury.	Nature of Injuries.	Adm. to Hosp't.	General Treatm't.	Disch'd.	Ret'd to Duty.	Died.	Wounding Instrument.	Direction of Wounds, &c.	Remarks.
CASE No. 43. Edw. Hawkins, Private Co. F, 52d Ill. Inf'y.	Apr. 7, 1862.	Fracture of femur left, low. third.		Limb adjusted, bone removed, splint, extension, and cold water dressings.	July, 1863.				Ball entered on outer side and lower third of left thigh, making a comminuted fracture of the femur, emerged on inner side, and passed through left thigh posterior to the femur.	Right leg healed rapidly; bone united on 27th June, (50 days after injury); there seemed however to be some necrosed bone, which kept up continued irritation; remained in hospital over a year, when he was discharged the service at his request. Six days after injury was received, the wound had become gangrenous, necessitating an amputation. May 15th, symptoms of pyemia made their appearance, but the disease was checked by tonics and stimulants, under the influence of which he slowly recovered; cure perfect.
CASE No. 44. Saml. McCombs, Private Co. D, 23d Ill. Inf'y.	"	Fracture of tibia and fibula, near the tubercle.		Amputation of June, the thigh at the lower third.	June, (?)					May 1st, patient doing well; 3d, opened an abscess 1 1/2 inch. below patella, discharging considerable quantity of pus; 27th, removed two small pieces of lead from lower part of the patella; bone partially united; June 7th, large suppuration of knee-joint discharging a quantity of pus and a small piece of the lining of the joint; 17th, complete union; all symptoms favorable; 28th, able to walk about; July 23d, diarrhoea followed by symptoms of pyemia, from which the patient gradually sunk daily until he died.
CASE No. 45. John W. Milton, Private Co. E, 14th Iowa Inf'y.	"	Fracture of knee-joint.		Limb adjusted, splint-extension by cord and pulley, cold water dressing, tonics, stimulants, and generous diet.			Sept. 15, '62.			

RESUME.

Nature of Injuries.	Number Total.	Battle of Belmont.	Battle of Pittsburg Landing.	Battle of Fort Donelson.	With Amputation.	Result.			Without Amputation.	Result.		
						Returned to Duty.	Discharged.	Died.		Returned to Duty.	Discharged.	Died.
Fracture of humerus, -----	2	2	0	0	1	1	1	1	1	1	1	1
" " femur, -----	1	1	0	0	0	0	0	0	1	1	1	1
" " upper third, -----	2	1	0	1	1	0	0	1	1	1	1	1
" " middle " -----	2	0	2	0	0	0	0	0	2	0	1	1
" " lower " -----	2	0	2	0	0	0	0	0	2	0	1	1
Not known, -----	1	0	0	1	1	0	0	1	0	0	0	0
Fracture of ulna and humerus, -----	1	1	0	0	0	0	0	0	1	0	1	0
" " ulna and radius, -----	1	0	0	1	0	0	0	0	1	0	1	0
" " tibia, -----	1	0	0	1	1	0	1	0	0	0	0	0
" " fibula, -----	1	0	0	1	0	0	0	0	1	0	0	1
" " tibia and fibula, -----	2	0	1	1	2	0	2	0	0	0	0	0
" " sup'r. maxillary, -----	1	0	0	1	0	0	0	0	1	0	1	0
" " inf'r. " -----	1	0	0	1	0	0	0	0	1	0	1	0
" " occipital bone, -----	2	1	0	1	0	0	0	0	1	1	0	0
" " frontal " -----	1	0	0	1	0	0	0	0	1	0	1	0
Injury to bones of tarsus, -----	1	1	0	0	0	0	0	0	1	0	1	0
" " periosteum femur, -----	3	3	0	0	0	0	0	0	3	1	1	1
" " " scapula, -----	1	1	0	0	0	0	0	0	1	1	1	1
Fracture of clavicle, -----	1	0	1	0	1	0	1	0	1	1	1	1
Wound of knee-joint, -----	1	0	1	0	1	0	1	0	1	1	1	1
" " right lung, -----	4	2	2	0	0	0	0	0	2	2	2	2
" " left " -----	2	1	1	0	0	0	0	0	1	1	1	1
" " desc'g. colon, -----	1	0	1	0	0	0	0	0	1	1	1	1
" " shoulder and neck, -----	3	0	2	1	0	0	0	0	2	2	2	2
" " back, -----	3	1	0	2	0	0	0	0	1	0	2	2
" " nates, -----	1	1	0	0	0	0	0	0	1	1	1	1
" " foot, -----	1	1	0	0	0	0	0	0	1	0	0	0
" " one thigh, -----	2	2	0	0	0	0	0	0	2	2	2	2
" " both thighs, -----	2	2	0	0	0	0	0	0	2	2	2	2
	45	21	11	13	7	0	4	3	14	14	14	10

Combining these statistics with those gathered by your Committee from other western battle fields, we obtain the following tabular results:—

Wounds Received in the Western Battles.

	Recov'd.	Died.	Total.
Gunshot Fractures of the Cranium,	3	8	11
“ “ “ Face,	15	2	17
“ “ “ Shoulder-Joint,	4	2	6
“ “ “ Humerus,	30	5	35
“ “ “ Elbow-Joint,	14	3	17
“ “ “ Fore-arm,	20		20
“ “ “ Pelvis,	2		2
“ “ “ Femur,	17	16	33
“ “ “ Knee-Joint,	9	16	25
“ “ “ Leg,	23	9	32
Penetrating Wounds of Thorax,	12	20	32
“ “ “ Abdomen,	4	12	16

Fractures of the Cranium.

Three of these only recovered, and these were merely ploughed by the shot, the bullet not entering the brain. Two of them were trephined for the depression. None of the cases of penetrating wounds were trephined, as the bullet and fragments of bone, hair, and clothing are in such cases driven far within the cerebrum, and cannot be removed by operation.

Fractures of the Face.

There is but little mortality from this accident.

Fractures of Knee-Joint.

The great mortality of this injury is obvious at a glance, being about 66 per cent. Many cases were lost early in the war by the reluctance of surgeons to amputate. The innocent look of a knee-joint, which has been penetrated by a bullet, should, however, never deceive us. The patient will die unless he has operative assistance. We have been able to learn of only two cases which recovered without operation.

Penetrating Gunshot Wounds of the Thorax.

Extremely dangerous, only 12 out 32 recovering.

Penetrating Gunshot Wounds of the Abdomen.

Still more fatal, only 25 per cent. recovering.

Amputations.

The following cases of amputation are on our records:—

	Recov'd.	Died.	Total.
Amputation at shoulder-Joint,	4	2	6
“ of the Arm,	14	1	15
“ “ Forearm,	5		5
“ “ Thigh, Upper third,	6	4	10
“ “ “ Middle “	4	7	11
“ “ “ Lower “	10	5	15
“ “ Leg,	21	4	25

Resections.

A considerable number of cases of resections have come under our observation with the following results:—

	Recov'd.	Died.	Total.
Resection of the Shoulder-Joint,	8	2	10
“ “ Knee “	1		1
“ Continuity of the Shaft of Femur,		2	2
“ of the Elbow-Joint,	6	1	7

Discussion of the Operations.

It is now well settled that amputations of the superior extremity should only be performed when the limb is obviously going to mortify, from the destruction of its vessels and nervous trunks. Shattered shoulder and elbow-joints should be resected instead of amputated. The mortality of amputation at the shoulder, as above shown, is one in three, while that of resection at the same place is only one in four. In the British wars with Napoleon, 44 cases of amputation at the shoulder are reported, of which 17 died. In the Schleswich-Holstein campaign, 19 resections of the shoulder are reported, of which 7 died. Combining these and our own statistics, we have the following results:—

	Recov'd.	Died.	Total.	Pr ct. of Deaths.
Amputation at the Shoulder,	31	19	50	38
Resection “ “	20	9	29	31

Showing an advantage of 7 per cent. in favor of resection.

Amputations of the arm below the shoulder have but little mortality. Of 15 cases only 1 died, and of 72 cases mentioned by GUTHRIE, only 17 died. Combining both, we have a mortality of a little over 20 per cent. The British mortality is obviously excessive, owing to the crowded state of their hospitals in the Crimea and Scutari. If the men are kept in open tents in the field, the mortality of this amputation will not be much above 8 or 10 per cent. Still the arm should not be amputated for a gunshot fracture, unless the circulation is obviously destroyed, as it recovers from the most surprising injuries with ease. In cases of badly shattered elbow-joints, resection should be preferred to amputation. The mortality in our cases of this resection was only 1 in 7. ESMARCH quotes 40 cases, of which 6 died. Combining these, and comparing the result with the amputations of the arm before mentioned, we have the following table:—

	Recov'd.	Died.	Total.	Prct. of Deaths.
Resection of the Elbow-Joint,	40	7	47	15
Amputation of Arm,	69	18	87	21

Showing an advantage of 6 per cent in favor of resection of the elbow.

Amputations of the fore-arm present very little danger, but are rarely necessary except for cases where the hand has been torn off. In nearly all bullet wounds the hand may be saved.

The statistics of this war present some anomalies in the matter of amputation of the thigh. Thus, for instance, out of 10 amputations in the upper third, only 4, that is 40 per cent., were fatal, whereas, in military experience heretofore, the mortality of amputations at that locality have been 80 to 90 per cent. In the Crimean war it was 87 per cent. This anomaly in the statistics occurs in consequence of adding in all the high amputations of the thigh in a certain division of troops at the siege of Vicksburg. The wounded in this division were not transported to general hospital, but were treated in the field in open tents, pitched on a high, breezy bluff. The curtains of

the tents being raised, the men breathed a pure untainted air, and made recoveries which would astonish the denizens of crowded brick hospitals. We are informed by surgeon JOHN M. WOODWORTH, of the 1st Illinois Light Artillery, that a similar superiority of success accompanied the field treatment of the wounded near Atlanta. Our own personal experience in the field also points in the same direction. Indeed we are of the opinion that there is seldom any hospital arrangement which gives so favorable results after amputation as retaining the men in the fresh air of the fields. The amputations at the middle third of the thigh contain no Vicksburg statistics, and are made up of men mostly treated in general hospitals. The results, therefore, are less favorable, and actually show a mortality of 64 per cent. The result of our experience is, that the difference in mortality between the results of good field treatment, and those of treatment in average general hospital buildings is nearly as follows:—

Mortality of amputation of the thigh	Treated in	Treated in
	Ordinary General Hospital Buildings.	the Field in Good Circumstances.
At the Upper third,	85 per cent.	45 per cent.
“ Middle “	60 “	30 “
“ Lower “	30 “	20 “

It is gratifying to observe, however, that many of our military hospitals have been so far improved that they now rival the success of field treatment, and that on the whole our present general hospitals are superior to any that have ever been constructed on so large a scale, in European wars. It is important also to observe that the essence of the improvement, consists in the superior character of modern arrangements for ventilation. In the Mower General Hospital, at Chestnut Hill, Philadelphia, these arrangements are particularly excellent, and the air is freely admitted to the wards, close to the head of each cot, so that every patient enjoys a respiration almost as pure as that of the open fields. The consequence is, as might be expected, out of 6000 patients no case of hospital gangrene has occurred, and only one death has taken place from erysipelas. In short,

hospital gangrene, erysipelas, and pyæmia, the special scourges of hospitals, have been completely disarmed of their terrors.

CIVIL SURGERY.

This department of our science has been making important advances. The improvements in Ophthalmic Surgery will be detailed by the Committee on that subject. In syphilitic literature, we have to note the pretty general acquiescence of the profession, in the opinion that hitherto we have confounded two distinct diseases under the name of syphilis. The Hunterian Chancre instead of being a typical form of either, is the result of a complication of chancre with chancroid. The subject cannot, however, be fully discussed in this report. The best elucidation of the subject, in English, is at present found in BUMSTEAD on Venereal; last edition. We dissent, however, from some of his conclusions on the treatment of syphilis.

Diseases of the Articulations.

There has been within the past few years, a general advance of the art of treating joint and spinal diseases.

There are three great principles which run through this whole branch of surgery, like lines of light, which, when fully comprehended, reduce its apparent obscurity to clearness and order. These principles are as follows:—

1st. Simple chronic inflammation of the joints and spine have a tendency to spontaneous recovery, but this tendency is overcome by the irritating influence of the pressure and friction of the parts upon each other, by which the inflammation is exasperated and forced on to the destructive results of suppuration and caries. Hence a vast proportion of the spinal, hip, and knee diseases are readily cured, by any good extending apparatus which draws sufficiently to take off all the pressure and friction of the inflamed parts.

2d. The plastic diathesis, when strongly present, has an almost unlimited power to prevent suppuration and caries; while the supervention on the other hand of the aplastic diathesis, will often bring a joint to these destructive results in a very few days. Now, as modern science has placed these diathesis

very much within our control, we put off the suppurative stage, and gain unlimited time and opportunity for the cure of joints, by maintaining a decidedly plastic condition in our patients.

3d. All tissues, bone included, yield and change their form under continuous mechanical pressure or tension. Hence not only club-feet, but bow-legs, bent-knees, flexed-hips, and curved-spines, as well as almost all other deformities of position, will yield to mechanical force steadily applied, and very many cases which were formerly reckoned hopeless, are perfectly curable. On these three simple principles hang almost all the resources of modern orthopedy.

The subject of fractures has received, of late, increased attention among Western surgeons. Dr. PRINCE, of Jacksonville, Illinois, Dr. LATTA, of Goshen, Indiana, Dr. DODGE, of Janesville, Wisconsin, and others, in various locations, have developed improved appliances of value. Perhaps the most practically useful of them are those which have been devised to secure painless counter-extension in fractures of the inferior extremity. This is now accomplished successfully in three principle modes:—

1st. By the single inclined plane. A simple board or fracture-box being placed under the fractured limb, and sloping upward from the nates to the foot-board of the bed, is the principal apparatus. Adhesive straps are attached to the leg and fasten to a cord which runs over a pulley in the end of the board with a weight attached; this makes the extension. The weight of the body is the counter-extension. The same counter-extension can be made on the bed alone, by simply raising the foot of it ten or twelve inches, and placing the pulley in the foot-board.

Probably for general use this is the best of all methods. Two other plans, however, may be resorted to. One is to have a long splint and a steel bow at the top reaching above the shoulder, which is attached to large adhesive straps, running down the breast and back. The other way is to make use of pressure against the ischium of the sound hip, as a *point d'appui* for counter-extension, as in a very ingenious apparatus devised by Dr. LATTA, of Goshen, Indiana.

The treatment of indolent ulcerations has apparently received an impetus from a suggestion of Dr. LUCIUS CLARK, of Rockford. The plan consists of simply giving the patient large and frequent doses of sulphur, internally, until the system is saturated with it. As tested by Prof. ANDREWS, at Mercy Hospital, in Chicago, the effect of the drug would seem to be to stimulate very powerfully the growth of granulations. One case took 30 grains at a dose, five times a day. In five days a luxuriant crop of granulations was produced in an indolent old ulcer of two years' standing. In ten days the ulcer was full and partly healed. In a few days more the cicatrization was complete. The granulations had a much redder color than usual, but did not present any other evidence of inflammation. If sulphur shall prove to have a reliable power of increasing the growth of granulations, it will be a most valuable agent. At present only about ten cases have been experimented upon. The success is such as to encourage further trial, but from so limited an experience, we do not feel willing to pronounce a final opinion upon the subject. It should be remarked that many cases require opiates with the sulphur, in order to restrain the purgative action.

The subject of the exsection of portions of nerves, for old and otherwise incurable neuralgias of aggravated character, has received some recent attention in this State. Some cases of ten years standing have been treated in Mercy Hospital with success. In one case the myloid branch of the inferior dental nerve, which has been commonly supposed to be a motor nerve, was the seat of trouble, and the removal of half an inch of it effected a cure, showing that it has, at least in part, a sensory function. In all such operations it is important to remember that the cause of the neuralgia is situated, not where the pain is felt, but in some foramen, canal, or notch through which the nerve passes, and in which the trunk of it is compressed by organic changes. The nerve, therefore, must be cut on the *proximal* side of such constrictions. For instance, the inferior dental must be cut by trephining the ramus of the jaw, and reaching it before it enters the bone. The direction of GROSS

to cut such nerves just at their exit from their foramina, is not only absurd, but is proved by experience to be utterly inefficient. It is only in a few terrible, and unusual cases of neuralgia, that the resections should be practiced.

E. ANDREWS, M.D.,

S. W. NOBLE, M.D.,

F. B. HALLER, M.D.,

Committee on Surgery.

The Clinique.

MEDICAL WARDS OF THE MERCY HOSPITAL.

CHRONIC DIARRHŒA — CAMP DIARRHŒA, &c.

By N. S. DAVIS, M.D., Prof. of Practical and Clinical Medicine.

CASE I. This man, aged about 35 years, has recently returned from the army in the South. He was admitted into the hospital yesterday. I learn that he has had diarrhœa constantly for the last six or eight months. You see his skin is dark color, exceedingly rough and dry; he is greatly emaciated; countenance haggard; lips thin, pale, and dry; tongue and gums pale, but clean, and inclined to dryness; little or no appetite; abdominal walls sunken, but not tender; intestinal discharges frequent, generally large in quantity, thin, and of a pale yellow or ash-gray color, and accompanied by very little pain, though sometimes they have been small in quantity, mixed with mucus and tinged with blood. His urinary secretion is scanty, nearly natural in color when voided, but becomes turbid with phosphatic salts on standing. The feet and ankles are cedematous, especially when allowed to remain in a dependent position. His pulse is small, feeble, and about 100 per minute.

CASE II. Turning to the next bed we find another patient, also from the army. He was brought into the hospital, two days since, in a state of extreme exhaustion. His expression

of face is strongly hippocratic; his tongue and gums are less pale than in the first case, but look dry, tender, and present some points of aphthous ulceration. The skin is even more rough and dry than in the other case; the pulse is very feeble and quick; the extremities cool and extremely emaciated. His pulse is small, feeble, and frequent. He has had diarrhoea, sometimes assuming the character of dysintery, for several months. His discharges are at present dark colored, thin, and tinged with blood, and are sometimes passed involuntarily.

CASE III. This man, aged about 30 years, has also been in the South during the past two years. He has not, however, the extreme emaciation or haggard countenance presented by the other two. His whole cutaneous surface is white or bloodless, while the lips, tongue and gums are remarkably pale. His skin is cool; pulse soft and only slightly increased in frequency; tongue clean, and appetite fair, though digestion is often accompanied by flatulency. He has been affected with a moderate chronic diarrhoea during the last four months. The discharges have been thin and copious, but usually not more than four or five in the twenty-four hours. Though able to be up, he is quickly exhausted by muscular exercise.

The three foregoing cases illustrate different varieties and stages of a disease that has destroyed the lives of a far larger number of our soldiers than all the armed rebels of the South. The change of diet, habits, and climate involved in the sudden transition from civil life in the North to the military camps in the South, causes a great prevalence of diarrhoea and dysentery, and many of the cases are protracted in a chronic form. From such of the latter as have come under my observation, I think the symptoms justify their arrangement into two classes. One embraces such cases as are characterized by some pain and soreness in the abdomen; a very dry, harsh skin; rapid emaciation; increased frequency of pulse; and frequent intestinal discharges, generally thin, redish yellow or dark brown, containing some mucus, and sometimes tinged with blood. The other class embraces such cases as present little pain or tenderness in the abdomen; little emaciation; a pulse nearly natural

in frequency; and instead of a rough and dry skin, the whole cutaneous surface appears bloodless, with paleness of the lips and often a sallow hue of the face. The intestinal discharges are copious, very thin, and generally of a pale yellow or gray, ish color, and seldom contain any appearance of mucus. The third patient now before the class, is a fair sample of this variety of cases; while the first and second are specimens of the other class in an extreme stage of advancement. In the first class of cases there is evidently an inflammatory condition of the mucous membrane of the *ilium* or colon, or both. The altered properties of the membrane, and the accumulation of blood in it, constituting such inflammatory condition, is, not only productive of morbid secretion, as seen in the frequent and *unnatural* evacuations, but also of infiltration into the sub-mucous tissue, causing tumefaction and subsequently induration with abrasions and ulcerations upon the surface. In the second class of cases there is much less evidence of inflammatory action, the special pathological condition of the mucous membrane being that of extreme irritability, coupled with such a perversion of function in the capillaries, as to cause an almost constant effusion of fluids instead of absorption. This extreme sensitiveness sometimes extends throughout the whole alimentary canal, and even into the lining of the hepatic ducts. In such cases whatever food or drink is taken, is speedily followed by such excessive peristaltic movements that a large part of it is hurried through the intestines without digestion or absorption. Consequently the patient becomes rapidly anemic; weak; countenance sallow or of a waxy paleness; and the watery element of the blood so much in excess as to cause oedematous infiltrations into the feet and ankles, or whatever part may remain most dependent. In the treatment of this class of cases of chronic diarrhoea there are three plain indications to be fulfilled, namely: to allay the morbid sensibility of the mucous membrane and thereby quiet the excessive peristaltic movements; to correct the perverted action of the capillaries; and to restore a more efficient digestion and nutrition.

The first of these requires the use of anodynes, especially the

preparations of opium; the second calls for the use of a class of remedies, the specific action of which is not easily described, but which are well known to the profession; such as nitrate of silver, sub-nitrate of bismuth, oil of turpentine, &c.; while the third is to be accomplished chiefly by dietetic and hygienic regulations, sometimes aided by the preparations of iron. In the third case to which your attention has been called, we have endeavored to fulfil the several indications by giving the patient a powder of sub-nit. bismuth 10 grs., sulph. morph. $\frac{1}{4}$ of gr. every six hours, and three grains per. sulph. of iron in solution, between; while his diet has been chiefly boiled milk, slightly thickened with wheat flour.

He has already taken these remedies steadily for five or six days, resulting in so decided an improvement, that we shall continue it unchanged.*

For the treatment of the first class of cases, to which the first two patients belonged, we have the same indications with the addition of a fourth, namely: to use some alterative capable of inducing the re-absorption of those semiplastic infiltration or deposits which have caused the thickened and indurated condition of the affected portions of the mucous membrane. Here is one of the greatest difficulties in the treatment of this class of cases when they have become thoroughly chronic. The practitioner finds every new combination of anodynes and astringents that he may make, to relieve the patient *temporarily* only. The mercurials cannot be relied on for the desired alterative effect, because they increase the evacuations on the one hand, and diminish the plasticity of the already impoverished blood, on the other. While on a professional visit, recently, at the prisoners' camp on Rock Island, I was kindly shown through the hospitals by Drs. WATSON, GLEASON, and GILBERT.

* The two last mentioned cases both terminated fatally; one in forty-eight hours after its admission to the hospital; and the other in about five days. The third case, which in the above clinic was described as being treated on full doses of sub-nitrate of bismuth and sulphate morphine, alternated with per. sulphate of iron, was continued on the same treatment, only gradually lessening the quantity of morphine, for about three weeks, during which he fully recovered, and was discharged from the hospital.

Among them I found one devoted to diseases of the bowels, under the care of Dr. GILBERT, in which he had treated a considerable number of cases, both of diarrhœa and dysentery, with bromine held in solution by the aid of bromide of potassa, as the only remedy. Encouraged by his success, and hoping that the bromine might prove to be the alterative long needed in these cases, I commenced using it immediately on my return home. Thus far its effects have fully answered my expectations. The formulæ which I have used for adults is as follows:—

R. —Bromine,-----	16 gtt.
Bromide Potassa,-----	20 grs.
Water,-----	℥iv.

Mix, give a tea spoonful every 3 or 4 hours.

Although the two first cases to which I have called your attention, are already hopelessly exhausted, we will give them of this formulæ, a teaspoonful every two hours, and a powder of sub-nitrate of bismuth and morphine, each night and morning. We will also try to sustain the failing powers of life by milk-porridge and moderate doses of brandy and milk.

Their progress you will be able to determine in subsequent visits to the hospital wards.

Proceedings of Societies.

FOX RIVER VALLEY MEDICAL ASSOCIATION.

Pursuant to the call issued by the Aurora Medical Association, the Physicians of Aurora and vicinity assembled in the Common Council room, in the city of Aurora, on Thursday afternoon, Sept. 1st, 1864, and, on motion of Dr. Higgins, of Aurora, Dr. Joseph Teft, of Elgin, was called to the Chair, and Dr. D. W. Young, of Aurora, chosen Secretary.

Dr. Young stated the object of the meeting.

Dr. Winchester, of Elgin, moved that the meeting proceed to organize a District Medical Association.

On motion of Dr. Allaire, the Secretary read the following Constitution, which he had drawn up to present to the meeting.

1st. This Association shall be known and distinguished by the name of Fox River Valley Medical Association.

2d. The members of this Association shall collectively represent and have cognizance of the common interests of the Medical Profession in the Fox River Valley; and shall hold their membership by election or invitation.

3d. Any regular practitioner of medicine in good standing in the profession, who holds a diploma granted him by a regularly authorized Medical College, of *legitimate* medicine, or any under graduate, of good moral character, may become a candidate for membership; and if three-fourths of all the members present, at any regular meeting of the Association, vote in his favor, then he shall become a member by signing the Constitution and By-Laws.

4th. Members by invitation shall consist of regular practitioners of medicine of reputable standing in the profession, from any part of the United States. They shall receive an invitation from the Association after an introduction from the member presenting them. They shall hold their connection with the Association until the close of the session at which they are invited, and may participate in the discussions, without the right of voting.

5th. The regular meetings of this Association shall be held on the first Monday of January, April, July, and October of each year. The place of meeting shall be determined for each next succeeding meeting by vote of the Association.

6th. The officers of this Association shall consist of a President, Vice-President, Secretary, Treasurer, and an Executive Committee of three, who shall be elected by ballot, and hold their office for one year, and until their successors are elected.

7th. The President shall preside at the meetings of the Association, preserve order and decorum in debate, give a casting vote when necessary, and perform all such other duties as custom and parliamentary usages may require, and *deliver a good written address* at the expiration of his term of office.

8th. The Vice-President shall assist the President in the performance of his duties, and during the absence, or at the request of the President, shall officiate in his place.

9th. The Secretary shall record the minutes and authenticate the proceedings, conduct the correspondence of the Association, and perform such other duties as the Association may from time to time require.

10th. The Treasurer shall have the immediate charge and management of the funds and property of the Association. He shall report the state of the finances whenever called upon by the Association, and give a full report in writing at the close of his term of office.

11th. The Executive Committee shall also be the Committee on Finance, Credentials, and Printing.

On motion of Dr. Burdick, of Elgin, the above was adopted as the Constitution of this Association.

Dr. Young moved that the gentlemen present now be requested to come forward, sign the Constitution, and become members of this Association.

The following gentlemen then signed the Constitution, and duly become members:—

P. A. Allaire, Aurora, Illinois.	O. I. Corbin, Plainfield, Illinois.
F. Bartels, Elgin, “	F. N. Burdick, Elgin, “
J. Nicoloy, Plainfield, “	E. J. Morse, Naperville, “
S. F. Hance, Aurora, “	Joseph Teft, Elgin, “
O. D. Howell, Aurora, “	S. O. Long, Big Rock, “
S. C. Gillett, Aurora, “	N. F. Eddy, Geneva, “
E. Winchester, Elgin, “	Wm. LeBaron, Geneva, “
L. H. Angell, Aurora, “	L. A. Winslow, Aurora, “
D. S. Jenks, Plano, “	George Higgins, Aurora, “
C. Cushing, Warrenville, “	D. W. Young, Aurora, “

The Secretary, Dr. Young, then read the following By-Laws of the Aurora City Medical Association:—

The order of business at the regular meetings of this Association shall, at all times, be subject to the vote of three-fourths of all the members in attendance; and until permanently altered, except when for a time suspended, it shall be as follows:—

1. Calling the meeting to order.
2. Calling the roll of officers.
3. Reading the minutes of last meeting.
4. Reception of members by invitation.
5. Proposals for membership.
6. Unfinished business.
7. New business.
8. Reading and discussing voluntary communications.
9. Correspondence.
10. Selection of next place of meeting.
11. Adjournment.

Members of this Association shall be liable to censure, suspension, reprimand, or expulsion for wilful neglect, or disregard of the rules and regulations of this Association, or violation of our code of professional ethics. A vote of two-thirds of the members present shall be required to censure or suspend, and one of three-fourths to expel.

In case of any charges being preferred against any member, which might lead to his censure, suspension, or expulsion, the Association shall immediately give to the accused a written copy of the charges preferred. The matter shall then lie over till the next regular meeting, when due action shall be taken thereon.

Five members shall constitute a quorum; a less number may adjourn.

On motion of Dr. Young, the Code of Medical Ethics adopted by the American Medical Association were adopted for the government of this Association.

On motion of Dr. Howell, the above By-Laws were adopted as the By-Laws of this Association.

On motion of Dr. Winslow, the Association then proceeded to the election of officers for the ensuing year.

On motion of Dr. Allaire, Dr. S. F. Hance, of Aurora, and Dr. S. O. Long, of Big Rock, were appointed tellers.

The balloting resulted as follows:—

President, Joseph Tefft, M.D., of Elgin.

Vice-President, P. A. Allaire, M.D., of Aurora.

Secretary, D. W. Young, M.D., of Aurora.

Treasurer, Wm. LeBaron, M.D., of Geneva.

Executive Committee, O. I. Corbin, M.D., of Plainfield; O. D. Howell, M.D., of Aurora, and S. O. Long, M.D., of Big Rock.

On motion of Dr. L. H. Angell, the above were declared duly elected as the officers of this Association for the ensuing year.

Dr. Winchester, of Elgin, suggested that the Association ought to adopt a fee bill, so that we would have a uniform rate of charges throughout the entire district.

By request the Secretary read a portion of the fee bill adopted by the Aurora City Medical Association in April, 1857.

It was the unanimous opinion of the meeting that, in consequence of the increased price of all kinds of drugs and medicines, and the increased expenses of living, these rates are *too low* for these times.

Dr. Allaire moved that the rates be increased to two dollars per visit in the cities, for day visits.

Dr. Winchester moved to amend by inserting \$1.50 instead of \$2. Amendment prevailed, and the following rates were agreed upon.

For each visit and medicine in city, during the day time, \$1.50; for each visit and medicine in the city, in the night, \$2.50.

Country Business.—One mile, \$1.50; thereafter add 50 cents per mile for day time; nights add 25 per cent.

For each obstetric case in city, \$7.50; in country add traveling fee 50 cents per mile after the first mile.

For examination and medicine at house or office, from \$1.00 to 10.00.

On motion of Dr. Winchester, of Elgin, Drs. Young, Allaire, and Winslow, of Aurora, were appointed a Committee to revise the balance of the fee bill.

On motion of Dr. Allaire, the Association adjourned, to meet at the Common Council Room, at Aurora, on the first Monday of October, next, at one o'clock P.M.

JOSEPH TEFFT, M.D., *President.*

D. W. YOUNG, M.D., *Secretary.*

Selections.

PATHOLOGY AND TREATMENT OF ASTHMA.

By HYDE SALTER, M.D., F.R.S., F.R.C.P.

Lecturer on Physiology and Pathology at the Charing-Cross Hospital Medical School, and Assistant-Physician to the Hospital.

II. ON THE TREATMENT OF ASTHMA BY THE IODIDE OF POTASSIUM.

This is a remedy that, in the opinion of many competent men, holds a high place in the treatment of asthma. Dr. Williams evidently thinks highly of it. I see many asthmatic patients who have been under the care of that eminent and able physician, and I find that for almost all of them he has ordered iodide of potassium. I remember some years ago receiving a long and interesting letter from my friend Dr. Oke, of Southampton, begging me to try it, and assuring me that he found it an almost unfailing remedy, and had seen it succeed in the most obstinate cases; indeed, he regarded it in the light of a specific. In many other and equally respectable directions I have heard its praises as loudly sounded.

But I must say that, according to my own experience, it does not deserve so high a place as has been given it. I find it entirely fail in a great many cases, while those in which its success is complete are comparatively few. I do not believe that in one case in five it of sufficient permanent advantage to be worth persevering in. Still, one case in five would be a great deal in such a disease as asthma; a disease so painful, and often so intractable; and I should not think it right to omit its trial in any case in which it had not been fairly tried. How to explain the lower estimate I have formed of its value than others have I cannot tell; but the very frequency with which I see it in the prescriptions of other physicians tells, I think, against it; for if it had done any material good—it had been a success—why should the patients come to me, and not rather continue under the care of those at whose hands they were receiving benefit? The frequency with which it is found in prescriptions for asthma represents, I think, the general opinion that is entertained on the part of those who prescribe it, rather than its utility to those who take it.

Sometimes, however, I have seen most striking results attend its use, as the following cases will show:—

E. H——, a lady aged thirty, who had suffered from asthma for seven years past, came under my care in September, 1863. Her paroxysms were of two kinds—very severe ones, lasting several days, at long intervals; and slight ones, occurring every night, and disturbing her sleep for an hour or two. From these last she had been suffering every night for some weeks when I saw her. Omitting many of the details of her case, I may mention the following as the most relevant:—Diet appears to exercise no influence on her attacks. Damp places agree with her the worst, and she is never well for the first day or two on going to a new place. She is liable to what she calls attacks of renal congestion, in which the urine is very thick and high-colored, and she thinks that this state of the urine is associated with and produces the asthma. Her father is a martyr to rheumatic gout, quite crippled by it, and has been for years; an uncle died of gout quite young. She has tried an infinity of medicines, and, as far as their effect go, they may be divided into two classes; those which give her slight relief, and those which give her no relief at all. Among the former are, inhaling chloroform, smoking stramonium, smoking various forms of cigarettes, burning nitre paper and inhaling the fumes, ipecacuanha as an emetic, mustard plasters, blisters, chloric ether in thirty-minim doses. Among the latter are, strychnine and nux vomica, valerian, lobelia, hot strong coffee, sulphuric ether, Indian hemp. The benefit derived from inhaling chloroform, fumes of nitre paper, from ipecacuanha as an emetic, and from chloric ether, is great at the time, for the smaller attacks, but in each case evanescent.

When I first saw this lady, she was staying at Chertsey, and having the miner attacks every night. I prescribed for her extract of stramonium, and one or two remedies which she had not tried. She called on me again about the 5th of October, and informed me that what I had prescribed for her did not seem to have affected her in any way; she still had the slight attacks every night. She was going away in three days to a place in Surrey, where she had always been bad and had had some of her most violent attacks; indeed, she had never been there without being violently asthmatic the whole time, and she looked forward to her visit with great apprehension. The house to which she was going was built, as she described it, almost in a well—in a place surrounded with water on all sides, and which was rather *wet* and *damp*. I ordered her five grains of iodide of potassium and twenty minims of aromatic spirit of ammonia, in a wineglass of water, three times a day. I saw her husband

on the 22d of October, seventeen days afterwards, and his report was as follows:—She had begun the iodide of potassium a day or two after I had ordered it, and had not had an attack of any kind, severe or light, since. The minor attacks had entirely ceased, and she slept uninterruptedly through the night, a thing she had not done for two or three months: she had gone to the dreaded place, and no attack had occurred—the first time in her life that that had ever happened. Her husband did not know when he had seen her so well. She was daily gaining flesh and strength. The lady herself, with great simplicity, gave the strongest possible testimony to the effect of the remedy by saying, in her written account of herself, that “she had been so well since she had been taking it that she had had no opportunity of trying what its effects would be upon her asthma.” To which of course I replied, that I did not care how long the same result should keep her ignorant of the virtues of the remedy.

It is now nearly a month since she has been taking the iodide, and she still remains perfectly free from her former symptoms. Occurring, as the change did, suddenly, and coincidently with the taking of the medicine, and under the most unfavorable circumstances—that is, when she was going to a place where she had never before escaped severe asthma as long as she was in it, I cannot but attribute the result to the remedy. What will be the effect of leaving it off, and whether on future occasions its results will be equally striking, the future only will show.*

The following case, in which the iodide appeared to be equally beneficial, was under my care during the past autumn:—

T. H—, a tall, pallid, spare man, aged sixty-two, had had asthma for six years, and for the last three the attacks had been frequent and very severe. He generally had an attack once a week, and if he escaped a fortnight thought himself very lucky. When I first saw him he had had for some time slight attacks every morning, about four o'clock, that woke him from sleep, and compelled him to sit up and cough and wheeze for an hour. There was no history of gout in the case; but there was clear evidence of occasional attacks of bronchitis. With regard to

* About a month after writing the above, I heard this lady had had a severe attack of acute bronchitis from exposure to cold. She was taking the iodide of potassium at the time. The bronchitis was very severe, so that for a day or two her life was in danger; but she had no asthma, although on all former occasions on which she had had bronchitis it had induced asthma. On the abatement of the bronchitis, I advised the resumption of the iodide of potassium; and at the time I last heard from her there had been no reappearance of the asthma, and this was fully two months from the time it was first given.

treatment, there was the old story; an infinity of remedies had been tried, and, with a single exception, nothing had done him any permanent good. That exception was chloroform, which never failed to give immediate relief. On waking each morning with his usual attack, from half a drachm to a drachm was inhaled. The difficulty of breathing at once subsided, the patient went off into a tranquil sleep, and there was an end of it; whereas, if the chloroform was not given, the dyspnoea would go on increasing, become very tedious, and very likely culminate in a regular attack. But with this single exception, all remedies that had been tried appeared inert. Several things that had not been employed I made a trial of, but with an equally unfavorable result till I tried iodide of potassium. The effect of this was very soon shown. No severe attack occurred after it was commenced, and in a few days the regular morning attacks ceased also. The patient now slept all night without disturbance, and there was no longer any necessity for resorting to the chloroform. This went on for six weeks; the iodide of potassium was then left off. In a few days the asthma began to show itself again, and in a week or two was as bad as ever. The iodide was then resumed, with the same beneficial results as before. I have not heard of this patient now for more than a month; and this very circumstance inclines me to hope that this remedy still keeps his enemy at bay.

It should always be borne in mind, in giving iodide of potassium for asthma, that it is often some time before it begins to take effect. I have a patient at the present time under my care who has been taking it for three weeks past in eight-grain doses three times a day, but it is only during the last week that any decided improvement has taken place in him. He has lost his spasms; the expectoration has very much decreased; and he has ceased to experience an abiding "thickness" and tightness of breathing that he had in the intervals of the attacks, and which never left him. His nurse tells me that whereas before, for months past, whenever he was asleep his breathing was audible and labored, and accompanied with a slight wheezing, it is now inaudible and tranquil. Yet for the first fortnight this patient derived no apparent benefit whatever from the drug, and was anxious to give it up; now, however, he is convinced of the good it is doing him, and is anxious to continue it. It may be asked, Why do I think that the improvement is really to be assigned to a remedy that seems to remain so long inoperative? Why may not the apparent benefit be a coincidence, and the drug be really doing him no good whatever? I think the

improvement is the work of the iodide, for two reasons. In the first place, from the fixedness of the patient's previous condition for a great length of time, no medicines or any other agencies that were brought to bear upon him making any difference in him. In the second place, from this tardiness of the action of the iodide of potassium corresponding with its action in other affections. How long is it, for instance, before it makes any appreciable impression upon a goitre, however complete and satisfactory its results may ultimately be!

I used to think that the benefit derived from iodide of potassium in asthma was entirely due to its beneficial influence in chronic bronchitis, and therefore that the only cases of asthma in which it did any good were cases in which chronic bronchitis and asthma coëxisted, and the one was the existing cause of the other. I am compelled, however, now to abandon that view; for in some of the cases in which its efficacy has been the most striking there has not been a trace of bronchitis.

Another theory that I once held I am also obliged to abandon—namely, that it was of advantage only in those cases in which the asthma was due to a gouty or rheumatic-gouty condition; and that it was by relieving this condition that it relieved the consequent asthma. In two of the cases that I have related this view would be borne out, for there was evidence of gout in both of them; but in the third there was not a trace. Moreover, I have seen cases of true gouty asthma in which iodide of potassium has been of no service.

Of its ultimate and exact *modus operandi* I can neither offer any explanation nor form any reasonable opinion. I am not, however, the less satisfied of its occasional great value, and of the propriety of its use in any case in which it has not been tried.—*London Lancet*

DIETARY IN DISEASE.

By EDWARD SMITH, M.D., F.R.S., F.R.C.P., Assistant-Physician to the
Hospital for Consumption and Diseases of the Chest, Brompton.

I purpose, in a short series of papers, to state, in the most concise manner, the views which I entertain, and the grounds of them, in reference to the most suitable dietary in certain conditions of disease; and, in order to avoid repetition and misconception, I shall premise two general observations—viz.: that as in cases of disease there are degrees in severity and progress

as well as certain exceptional conditions, I purpose to refer to those which present the usual symptoms, and have the fully developed effects of the disease, but are nevertheless in a remediable stage; and also that I do not intend to consider the pathology of disease further than may be necessary to establish bases for treatment. It will also be impossible for me to discuss at length the arguments by which any particular statement may be supported, but must be content to refer to the works of authors of the best repute, and to my own papers in the "Philosophical Transactions," or the separate works on the "Cyclical Changes" and on "Consumption in its early and remediable Stages."

I. DIABETES.

Wasting is the central condition of diabetes, around which all the other symptoms which mark the progress of the disease group themselves.

This is not due to defect of ingesta, for, contrary to other states of wasting, the appetite for fluid and solid food is increased; the egesta are also increased, both absolutely and relatively to the ingesta.

The wasting of the body must be almost exclusively of the soft tissues, and hence must be of fluid (seeing that nearly 80 per cent. of the weight of the body is water) and fat and other products of tissue-waste. In this disease the wasting is—

1st. Of fluid, and that only through the kidneys; for the skin, lungs, and bowel emit rather less than in health.

2d. Of sugar, either eaten as sugar ready formed, or produced in the alimentary canal from starch which had not been converted into fat and deposited in the tissues, or into carbonic acid and emitted by the lungs; and in the absence of starch, from the animal tissues.

3d. Of urea, the chlorides and ather salts; for whilst the quantity in each ounce of urine is lessened, the total amount emitted daily in the stage of disease preceding extreme emaciation is increased.* When much nitrogenous food is given, urea is further augmented in quantity, and may then be more the product of food than of tissue.

4th. Of fat, which is used by the function of respiration.

Let us consider each of these as indications of treatment.

1. *The fluid.*—Without going beyond our depth, we account for the dryness of the skin and fæces by the excessive elimina-

* In a case which ended fatally the quantity of urea emitted daily in January, was found by me to be as follows: 665, 624, 561, 700, 650, 650, 816, 792, 825, 729, 552, 540, 540, 610, and 533 grains.

tion of water by the kidneys, since the same correlation is observed daily in both health and disease. The thirst is consequent upon the excessive excretion of water, as it is under the influence of excretion or heat in health. Hence to diminish the latter and increase the former we must lessen the excessive excretion of water by the kidneys. The excretion is increased by the ingestion of fluids, whether separated or combined with solids; and so long as the latter is uncontrolled it will support or increase the former. In scarcely any case of diabetes is the quantity of ingested fluid recorded; in exceedingly few has it been limited, and where limited the restriction has been extreme, and the quantity allowed has been below that needful in health—as, for example, a pint and a half of fluid. Yet nothing has been more clearly proved than that the emission of fluid from the body is increased or diminished by the imbibition of it, and that a certain supply is necessary for the due performance of vital actions. Hence the quantity must be limited; but not in a sudden manner, since the circulation has in a degree become accustomed to this large ingestion and emission of fluid, and to suddenly diminish the volume of the blood might arrest all vital actions; but by degrees and steadily, until it shall scarcely exceed, but be not less than, that in health—as, for example, in the fluids $3\frac{1}{2}$ lbs. (3 pints), and in the solids $1\frac{1}{2}$ lbs.

What relation has the sugar to the water? Excessive elimination of water alone is more easily controlled than when sugar is largely present with it. Hence are both due to some anterior and common cause? or is the sugar a diuretic agent? In my experiments upon myself, in health, I found sugar to promote diuresis when taken with water only on an empty stomach in the morning; and although this was not always the case, the effect was so frequent that in the treatment of diabetes the mutual relation of the water to the sugar should be so regarded, as that water is necessary to the emission of sugar, and sugar is promotive, within limits, of the emission of water. Hence another reason for limiting the ingestion of water, and another explanation of the partial inefficacy of the plan; for if sugar be a diuretic, it will abstract fluid from the tissues if there be none to spare in the blood, and thus increase waste.

What relation have the urea and salts to the water? There is no evidence to show that urea and the chlorides are diuretic, yet they require water for their elimination; and *cæteris paribus*, as the water is increased daily so also (but not necessarily in proportion) will be the excretion of the urea and salts. Hence another reason for controlling the ingestion of water.

2. *The sugar.*—The daily ingestion of separated and combined sugar in health is from two to four ounces; but sugar is produced in the primary transformations of starch within the body by the action of the saliva and the pancreatic juice, and also (in however small or large a proportion) from the animal tissues. Both classes of foods agree in furnishing carbon, hydrogen, and oxygen, as carbonic acid and water, and perhaps free hydrogen, in their transformations, and differ chiefly in that flesh contains nitrogen and a larger proportionate quantity of fluid, and is eaten in much less amount than starchy foods. Hence, if for no other reasons, starchy foods will be the chief sources of sugar; but when flesh and other animal foods only are eaten, the converse will be the case. Recognizing the arrest of our knowledge at the point of the non-conversion of sugar into its subordinate elements, and finally into carbonic acid and water, (whether, with Barnard, we admit the conversion of the amyloid substance of the liver into sugar, or, with Pavy, believe that sugar is not converted into amyloid substance during life, and is subject to no transformation,) the aim must be both to lessen the source of the sugar and to promote the process of assimilation. *For the former we lessen the ingestion of sugar and starch—the chief sources of the sugar; and for the latter, increase the ingestion of nitrogen—the chief excitator, in the absence of exertion, of vital action.*

Hence the supply of the almost purely starchy foods, as arrowroot, tapioca, and sago, and the starchy foods poor in nitrogen, as rice and potatoes, should be entirely cut off, whilst the more highly nitrogenized vegetable foods, as wheaten flour, oatmeal, barleymeal, or ryemeal, must be used only within the narrowest limits. The highest nitrogenous foods of this class, as peas, beans, and lentils, if starchy food be given at all, should be eaten alone, or eaten with sharps—the inner husk of wheat. Beans in the whole scales should not be given, since only the inner part is digested, whilst the outer and by far the heavier portion passes off by the bowel; and hence bean, unless it could be taken in great quantities, can afford only an inconsiderable amount of nutriment.

Separated sugars have been given purposely as an article of food in diabetes; and why should they not be given? If the quantity of sugar excreted be increased only by the amount ingested, the chief effect has been the waste of so much food. The treatment is so far rather useless than injurious; but whether the mere absorption of so much useless matter, followed by its rapid excretion from the blood, interferes with other vital pro-

cesses, and thereby does harm, is not known. If sugar act as a diuretic, its presence must be injurious; but if not, the evil which it does may be fully counteracted by the good effect of other components of the food with which it may be associated, as in the use of milk. *But sugar cannot be regarded as food when it is given to a diabetic patient*, and since it does exist in the urine, it is better that it should be produced from starch than given ready formed, since the transformation of the latter produces animal heat, whilst the mere absorption of sugar into the blood does not increase heat. Well-fed flesh should be allowed, since the juices are rich in nitrogen, and the whole lean substance has much nitrogen in proportion to the carbon. In like manner, the preparation of gluten, albumen, and gelatin, although containing about 40 per cent. of carbon, are the richest foods in the proportion of nitrogen to carbon. Skimmed milk, and butter-milk, and then new milk, rank next in this relation, and at the same time supply fluid.

But with every attempt at limitation in the quantity of starch and sugar, a quantity of carbon and hydrogen must be allowed at least equal to that used in health, or wasting will occur both from defect of ingesta and excess of egesta; and as I know, conditions allied to scurvy, and even death itself, may result, and have resulted, from this so-called remediable starvation. In a state of quietude in health not less than 9 oz. of carbon, and with ordinary exercise not less than 10 oz., must be supplied daily. These quantities, apart from the hydrogen, may be found in from 31 oz. to 35 oz. of bread, in about 13½ oz. to 15 oz. of fat, and in about 8 to 9 pints of new milk, and 9 to 10 pints of skimmed milk or butter-milk. It is very difficult to assign the equivalent in meat, since it depends upon the amount of fat contained in its juices, or laid up separately with the flesh, but ordinarily from 26 oz. to 29 oz. of meat would be required to furnish that amount of carbon. Hence it is easy to supply enough carbon for the production of animal heat from either separated or combined fats; and since, in the absence of starch, this is the chief source of the carbon which is converted into carbonic acid, we must trust to fat and oils as to a sheet anchor. The nitrogen to be supplied in diabetes, even when improvement has taken place, must not be less than 300 grains daily, and the quantity may be increased indefinitely, subject only to the limitation in the carbon which is associated in foods with it.

3. *Urea and salts.*—The quantity of these substances emitted must not be greater than the equivalent supply in the food,

since otherwise they must be more abundantly derived from the tissues. Abundant nitrogen in food and a large emission of urea are proper. When, in the last stages of the disease, the digestion is very much weakened, a large part of the nitrogenous food will pass off by the bowel, and will not be converted into urea; and hence, with abundant food, the urea will be less than the equivalent nitrogen in the food.

4. *Animal heat.*—The production of animal heat is greatly lessened in diabetes, since so large a part of the healthy chemico-vital transformations of food does not occur; and in order to maintain a due amount, it is essential that fat and other animal food capable of final transformation into carbonic acid should be continually given. The condition of the skin aids in lessening this evil, since diminution in the vaporization saves heat, and heat is chiefly lost by the less costly method of radiation. When sufficient woollen clothing is worn, and heat is supplied directly by hot food, the evil is proportionally lessened.

It may not appear philosophical to try to induce the conversion of sugar by secondary agencies, or the elimination of fluid by other organs than the kidneys, and by way of derivation; yet all the usual efforts to maintain health tend to that end: as, for example, exertion in the open air, which, through increase of the respiration, will increase the elimination of the final products of the conversion of sugar—carbonic acid and water, and by the increase of capillary action will tend to increase perspiration. Hence, exertion and free exposure to the air in the early periods of the disease are very important. The use of tea is also very beneficial, since it tends to increase both the respiratory and the cutaneous actions.

Thus, a summary of the proper diet in diabetes is as follows:

1. *Fluids.*—To be limited by degrees daily until they shall not exceed five pounds and a half in both fluid and solid food. Of this quantity two to three pints should consist of new or skimmed milk, and one pint, or less, of tea. In the cold season and at night they should always be given when hot. Of all alcohols brandy is the best, and may be given with water only, or added to milk, or beat up with egg and milk, and given several times daily. No fluid should be given in greater quantity than half a pint at a time, and when milk is reduced in volume by cooking, the daily quantity of fluid must be made up by an additional supply of the same or other fluid.

2. *Solids.*—Dr. Prout's combination of eggs and milk (with sharps substituted for bran) is excellent. Four ounces of sharps and 4 oz. of peas, beans, or lentils may be made into bread or

pudding, with milk, or into omelettes with eggs and herbs.—Eggs and gelatin may be given when starchy food cannot be altogether intermitted. Eggs, gelatin, cheese, gluten bread, meat, fat, and oils may be given as largely as they can be digested. The free use of solid oil should be urged, whether in the cooking of fish or flesh, or in the use of water-cress as a solid, or drunk alone, so that several ounces may, if possible, be consumed daily; but as there are in all persons preferences and dislikes in reference to particular fats, that kind—whether butter, suet, oil, or fat of meat—should be allowed which is the most agreeable. Four oz. of sharps, 3 oz. of wheaten flour, 5 oz. of peas, 1 lb. of meat, 2 oz. of cheese, 2 pints of milk, and 3 eggs, will afford more than about 13 oz. of carbon and 1 oz. of nitrogen daily.—*London Lancet.*

ON THE HYPODERMIC TREATMENT OF UTERINE PAIN.

By J. HENRY BENNET, M.D.,

Late Physician-Accoucheur to the Royal Free Hospital.

I am not aware to what extent the hypodermic injection of sedatives has been resorted to for the treatment of uterine pain, since it was first introduced to the profession, but I am desirous of giving my testimony to its extraordinary efficacy in cases presenting that symptom. I may add, that my attention was first forcibly directed to this mode of treatment by the valuable papers of Mr. Charles Hunter in *The Lancet*.

During the present winter, I have used, with prompt and marked success, the hypodermic injection in several cases of severe dysmenorrhœa, with or without hysterical complications, and several others of uterine and ovarian neuralgia, and of facial neuralgia having uterine origin. The relief has been obtained in from fifteen to thirty minutes, without being attended or followed by the headache, loss of appetite, or nausea which are so frequently theates in a result of the use of opiny other way, even by injection into the rectum. This latter mode of administering opiates has hitherto been my sheet-anchor in the treatment of uterine spasms and pain, and is certainly most efficacious; but it is not unfrequently attended by all the above-mentioned drawbacks, from which the hypodermic injection appears to be singularly free. In nearly all the instances in which I have tried this mode of introducing opiates into the system,

the sedative result alone has been produced; there has been no subsequent bad effect whatever.

In one case of severe uterine tormina and pain, the result of arrested menstruation from cold, I injected thirty minims of the solution of morphia. In half an hour the pains, which had been agonizing for the previous twenty-four hours, were calmed. A good night's rest followed; and the next morning the menses had resumed their course, and my patient was all but well. In another similar case, the uterine pain was accompanied by severe hysterical symptoms. The injection was followed by the same favorable result:—ease, sleep, and rapid disappearance of all morbid symptoms.

Owing to the complete control over the element of pain which the hypodermic injection of opiates appears to give, I have been able to carry on the necessary treatment, in an interesting case of uterine disease, which I should otherwise have been obliged to treat under chloroform, or at a great disadvantage. The patient, a young German lady of twenty-four, came to Mentone last autumn, by direction of her medical attendants, with the view of spending the winter in the South. She was considered to be suffering from neuralgia, facial and general, and from nervous irritability of the system in general. She had been traveling with her husband from place to place from bath to bath, in search for health, for more than two years. On being consulted, I recognized the existence of a host of uterine symptoms, and found that the neuralgic and nervous illness had manifested itself after a severe confinement, which had occurred about three years ago. The discovery of extensive inflammatory ulceration of the neck of the womb gave the key to the state of ill health. Singularly enough, none of her previous medical attendants had suspected the uterine origin of the neuralgia. Such cases are always very difficult to treat; interference with the uterine lesion all but invariably rousing the neuralgia. I have repeatedly had cases of the kind that I could only examine and treat locally, by giving chloroform to the full surgical extent on each occasion, and this I have had to do twenty or more times in the same patient.

With the patient in question the surgical treatment of the ulceration was borne tolerably well at first, but as the diseased surface became more healthy, and consequently more sensitive, endurance diminished. Every time the sore was touched, severe neuralgia followed, and the general health began to flag. In former days I should have suspended all treatment, and have sent the patient to the country for couple of months to allow

the nervous system to calm down, and to let Nature do her best. In this instance such a course was not desirable, my patient being very anxious to continue the necessary treatment so as to be locally cured before we separated in the spring. I thought, therefore, of the hypodermic treatment, and tried the injection of thirty minims of the solution of morphia immediately after each uterine dressing. This course was attended with complete success; no neuralgia ensued, and I have been able to continue uninterruptedly the treatment now all but brought to a successful issue. On one occasion I omitted the precaution, and was sent for at ten o'clock at night. I found the patient a prey to a most distressing attack of facial neuralgia, which had come on an hour before. She was positively convulsed and shrieking with agony. Chlorodyne, sulphuric ether, &c., had been taken, with no relief. I injected the thirty minims of morphia solution, and in twenty minutes she was calm and free from pain. It was repeated next day, and the facial neuralgia has not returned. This lady no doubt will gradually recover her health and get rid of the neuralgia when the uterine disease is thoroughly cured.

In a case of pure neuralgia, attacking first one and then another part of the body, I have injected from twenty to thirty minims of the acetate of morphia solution, forty-two days in succession, without any unfavorable result. The neuralgia, which was very severe, was entirely subdued by it for about eighteen or twenty hours, when it re-appeared, gradually increasing in intensity until the injection again relieved it. At the end of that long period the pains gave way, the treatment having been either curative, or having allowed the neuralgic attack to wear itself out. During the entire period of treatment, the patient, a very delicate lady, slept better than usual, ate as well (her appetite being usually bad, and the digestive powers weak), and was able to take part socially in all that was going on around her. No one, indeed, was aware, except her family, that she was suffering from so painful a malady. To my surprise, I was able to suspend the morphia suddenly, without any of the distress and discomfort which is habitually observed when opiates have been long used and are abruptly abandoned.

From what I have seen of the hypodermic system, I believe that its use is capable of great extension in the treatment of pain generally. I consider that the injection of a solution of morphia after any operation would deaden pain, and produce a general calm of the system both soothing and beneficial to the patient. I think also that this result might be obtained in most

cases without the usual drawbacks of opiates taken internally.

Some years ago, I recommended in this journal the injection of opium into the rectum as a means of modifying and even arresting obstinate sea-sickness. Since then various additional cases have come under my notice illustrating its efficacy. The great difficulty to all medication in sea-sickness is the fact that the stomach absorbs fluids with difficulty. By injecting subcutaneously, this difficulty is got over. Moreover, a subcutaneous injection would be managed easier on shipboard than the rectal injection, to which most people have a very natural antipathy.

I have used all but exclusively a solution of acetate of morphia in distilled water. Nine grains dissolved in two ounces of water gives a strength about equivalent to that of laudanum. The liquor morphiae of the Pharmacopœia contains spirit, and and I have found that it constantly occasions small patches of painful inflammation; without the spirit, on the contrary, it appears to be quite innocuous. A moderate sized steel needle or canula I find preferable to the small gold one. The steel canula is sharper and passes easier through the skin. By pinching firmly the fold of skin that has to be pierced between the finger and thumb, its sensibility to the puncture is much diminished. It does not seem to matter much, as regards results, in which region of the body the injection takes place. I have principally chosen the præcordial region for uterine and general pain, and for local neuralgia, a spot as near the region affected as possible.

Book Notices.

A TREATISE ON GONORRHOEA AND SYPHILIS. By SILAS DUREKEE, M.D., Consulting Surgeon to the Boston City Hospital; Fellow of the Mass. Med. Soc.; &c., &c. Second Edition revised and enlarged. With eight colored Illustrations. Philadelphia: LINDSAY & BLAKISTON. 1864.

This is a neatly printed volume of 467 pages, illustrated by eight very valuable colored plates. The style of the author is clear, concise, and pleasing. He has embraced in the work a consideration of the whole subject of gonorrhœal and syphilitic affections, both primary and remote. His opportunities for observation and practical experience in the treatment of these

diseases appear to have been ample; to which he has added a thorough study of what has been observed and written by others. These advantages, added to a well-balanced and well-disciplined mind, have enabled the author to give us as good a practical treatise on these important topics as any with which we are acquainted. We recommend the work to our readers as one of positive merit, and worthy of the general patronage of the profession.

OUTLINES OF SURGICAL DIAGNOSIS. By GEORGE H. B. MACLEOD, M.D., F.R.C.S.E.; Fellow of Faculty of Physicians and Surgeons of Glasgow; Lecturer on Surgery at Anderson's University, &c., &c., &c. First American Edition, reprinted from advanced sheets. New York: BAILLIERE BROTHERS, No. 520 Broadway. 1864.

This is a neatly published octavo volume of 505 pages. In the introductory chapter, of sixty pages, the author briefly discusses the conditions, means, and methods of diagnosis. In the remainder of the work, he gives a concise statement of the important points of diagnosis in tumors, morbid growths, fractures, dislocations, and surgical diseases generally. From such examination as we have been able to make, we think the student, and young surgeon especially, will find the work a valuable one for study and reference.

MILITARY, MEDICAL, AND SURGICAL ESSAYS. Prepared for the United States Sanitary Commission. Edited by WM. A. HAMMOND, M.D., Surgeon-General U.S.A. Philadelphia: J. B. LIPPINCOTT & Co. 1864.

This is a volume of 550 pages, elegantly gotten up by the publishers. Its contents are composed of seventeen essays, on the following subjects, viz. :—

I. Military Hygiene and Therapentics, by A. C. Post, M.D., and Wm. H. Van Buren, M.D., of New York.

II. Control and Prevention of Infectious Diseases, by Elisha Harris, M.D., of New York.

III. Quinine as a Prophylactic against Malarious Diseases, by Wm. H. Van Buren, M.D., of New York.

IV. Vaccination in Armies, by F. G. Smith, M.D., and Alfred Stille, M.D., of Philadelphia.

V. Rules for Preserving the Health of the Soldier, by Wm. H. Van Buren, M.D. of New York.

VI. Scurvy, by W. A. Hammond, of Washington.

VII. Miasmatic Fevers, by John T. Metcalf, M.D., of New York.

VIII. Continued Fevers, by J. Baxter Upham, M.D., of Boston.

IX. Yellow Fever, by J. T. Metcalf, M.D., of New York.

X. Pneumonia, by Austin Flint, M.D., of New York.

XI. Dysentery, by Alfred Stille, M.D., of Philadelphia.

XII. Pain and Anesthetics, by Valentine Mott, M.D., of New York.

XIII. Hemorrhage from Wounds, and the best means for arresting it, by Valentine Mott, M.D., of New York.

XIV. Treatment of Fractures in Military Surgery, by John H. Packard, M.D.

XV. Amputations, by Stephen Smith, M.D., of New York.

XVI. The Excision of Joints for Traumatic Cause, by R. M. Hodges, M.D.

XVII. Venereal Diseases, by F. J. Bumstead, M.D. of New York.

The titles to the several essays, with the names of the authors, will give the reader abundant assurance that the volume is one of much interest and value to all members of the profession, and especially to those connected with the army.

It is for sale by S. C. Griggs & Co., Lake Street, Chicago.

A SYSTEM OF SURGERY; PATHOLOGICAL, DIAGNOSTIC, THERAPEUTIC, AND OPERATIVE. By SAMUEL D. GROSS, M.D., Prof. of Surgery in Jefferson Medical College of Philadelphia; Surgeon to the Philadelphia Hospital; Member of the Imperial Royal Medical Society of Vienna, &c., &c. Illustrated by over thirteen hundred engravings. Third Edition, much enlarged and revised: in two volumes. Philadelphia: BLANCHARD & LEA. 1864.

The first edition of this great and valuable work on surgery, was noticed at length in this JOURNAL, at the time it was issued from the press. Since that time it has become so well known to the profession, both in this country and Europe, that it needs no further commendation from us. The present edition has

been carefully revised by the author. It consists of two volumes of more than 1000 pages each; printed on fair type, and elegantly bound. It is probably the most complete and valuable treatise on surgery, accessible to American students and practitioners.

For sale by S. C. Griggs & Co., Lake Street, Chicago.

Editorial.

CHICAGO MEDICAL SOCIETY.—This Society continues to prosper in our city. We are glad to see that most of the well-educated young men who locate in the city, promptly seek for membership, and are cordially received. With the commencement of October, the weekly meetings of the Society were resumed, and have been well attended. Though the meetings as heretofore conducted are interesting and profitable, yet we think there is room for improvement, especially in the manner of discussing important questions in pathology and practice. Instead of restricting each member to *ten minutes* in the discussion, for the purpose of allowing all the members opportunity to speak during the same evening, it would be more interesting and profitable to have those who speak on any subject occupy time enough to develop all the facts concerning it, and if necessary let the same topic be continued for two or three evenings in succession. The ten minutes rule leads to a disultory conversation, without the thorough discussion of anything.

CHICAGO MEDICAL COLLEGE.—The fifth annual course of instruction, in this institution, commenced on Monday evening, October 10. The general introductory lecture was delivered by Dr. M. O. Heydock, Professor of Medical Jurisprudence and Lecturer on *Materia Medica*.

The lecture room of the college was well filled, chiefly with medical students and practitioners. The evident object of the lecturer, was to strongly impress upon the minds of the class

the necessity and advantages, of patient application and untiring industry in the prosecution of their studies. The lecture was well written, and listened to by the audience with pleasure and profit. The number of students in attendance is one-third larger than during any previous year. The hospital is also well filled with patients, laboring under acute diseases and idiopathic fevers, affording ample facilities for true clinical instruction. We take pleasure in thus chronicling the steady progress of both the college and the hospital, for they are fully entitled to the confidence and support of the profession.

A NEW AMBULANCE.—Assistant-Surgeon Howard, of the U. S. Army, has prepared a model for an improved Ambulance, for use in the army.

PROMOTION.—Surgeon Richard S. Satterlee, of U. S. Army, has been promoted to the rank of Brigadier-General.

SURGEON-GENERAL OF U.S.A.—Dr. Joseph K. Barnes has recently been appointed Surgeon-General of United States Army, in the place of Dr. Wm. A. Hammond, removed.

EXPLANATION.—We shall hereafter continue to issue the EXAMINER without trimming. Almost all our subscribers wish to have it bound in a volume at the end of each year; and experience has fully shown that the trimming of each number, as it is issued, so frequently cuts the pages irregularly that it injures the volume, for binding, when completed.

SYMPTOMS OF POISONING FOLLOWING A DOSE OF DISULPATE OF QUININE.—SIR, I beg to forward the accompanying case, as I think it may prove interesting to many members of the profession:—

I was called in great haste one evening to a case of supposed poisoning. On arriving at the house, I found the man much better, but thought it safer to administer an emetic. On making enquiries, I found that he had prescribed for himself a mixture of sarsaparilla and quinine, which he had purchased from a druggist. The symptoms of poisoning came on after the first dose of this mixture: within a few minutes there was

severe pain and burning in the stomach; the face swelled; the mouth felt drawn forwards; then the legs and body swelled, and became very red, with intolerable itching, followed by a rash of urticaria. I thought it possible that some poison had become accidentally mixed with his mixture, and so the case rested for a time. However, shortly afterwards the man had an attack of pneumonia, and during his convalescence quinine was prescribed. Upon taking the first dose (two-thirds of a grain, Howard's), all the symptoms above described came on, clearly proving that the quinine was the original cause of the mischief.

I think this case interesting from the singularity and violence of the symptoms produced by so small a dose, and also as showing how a druggist may be unjustly blamed from an idiosyncrasy of a patient. I am, sir, your obedient servant,

Bradford, Feb. 1864.—London Lancet.

E. H. ROE.

UTERINE ACTION DURING SLEEP.—SIR, I have read with great interest Dr. Palfrey's case in reference to the above subject, and, in confirmation of his opinion, beg, to forward you the following statement.

I was called on the morning of the 20th of October last, to see a lady in her second confinement. Her residence being within a few doors of my own, no time was lost in visiting her. I found the child's head resting upon the perineum, and in a few minutes she was safely delivered of a fine healthy son. On going to bed the previous night she felt quite well, and had no intimation of the event about to take place, except a slight discharge, of which she took no great notice.

In this case, there is no doubt that the whole stage of dilatation, and partly that of expulsion, had taken place during sleep, as from her awaking until the birth of the child no longer period than half an hour could have elapsed. Her first confinement, some twelve months previously, had been very severe, occupying some forty-eight hours, with delivery by forceps. In this instance there were only three or four labor pains, and no after-pains whatever. I am, Sir, your obedient servant,

JOHN HARVEY, M.D.

Cheltenham, 1864.—London Lancet.

IN THE VOMITING OF PREGNANCY.—Dr. Kroyher, of Presburg, considers the tincture of nux vomica a specific. He directs a few drops to be taken in a little aromatic or cherry-laurel water, increasing it to ten, twelve, or eighteen drops, if necessary, every morning early, and in the evening. *Br.* 3-156.

A FOREARM WRENCHED OFF DURING EFFORTS AT REDUCTION FOR DISLOCATION.—M. Adolphe Guerin related to the Paris Surgical Society, of which he is a member, the following extraordinary case. A woman aged sixty-three was admitted into the St. Louis Hospital for a luxation of the shoulder-joint of three months' standing. On examination, it was found that the humeral head was lying under the coracoid process; and, notwithstanding the long time the dislocation had existed, M. Guerin immediately gave directions for an attempt at reduction. Not having pulleys at hand, mere traction was tried first. Extension was made by a lac, first fixed above the elbow, and afterwards at the wrist. Counter-extension was employed as usual, and four very intelligent and steady pupils were desired to pull gently, steadily, and without jerking. Whilst traction was thus gradually being accomplished, a snapping noise was heard, and the forearm fell to the ground, the operators, rather terrified, being besprinkled with blood from a spouting artery. M. Guerin controlled the vessel immediately, applied a ligature, pared the wound, sawed off the protruding portion of the humerus, covered the wound with a lateral flap formed by the tearing process, and obtained a stump of the usual kind. By examining the forearm lying on the ground, it was found that the severance had taken place at the elbow, and the forearm seemed to have broken off like a dead bough breaks off from a tree. The bones and surrounding parts were soft and friable, and the muscles could easily be unravelled with the finger, like a clot of blood. All the textures, in short—vessels, nerves, muscles, and bone, were discovered to be unsound, and the radius and ulna were snapped across by the moderate traction which the students had employed. Microscopic examination confirmed these views. M. Guerin considered that the alterations above alluded to were the result of the compression of the brachial plexus during the luxated state of the head of the humerus; and he thought that the practical lesson to be derived from this accident was, that surgeons having to treat luxations of three months' standing will do well to order tractions of a very moderate kind, so as to avoid so unpleasant an issue as the one just described. It seems to us that the *age* of the woman had a good deal to do with the result; nor can it be overlooked that the pulling of four persons at an aged patient's arm was in itself a produdure of some peril.—*London Lancet*.

PARAPLEGIA.—Dr. Brown Séquard says that nux vomica should be avoided as a most dangerous poison, in all cases of

paraplegia in which there are signs of congestion or inflammation of the spinal cord or its meninges, for in these it but increases the cause of the paralysis, and produces an aggravation of the symptoms. He says there are two distinct groups of cases of paraplegia, one distinguished by symptoms of irritation, the other characterized by the absence of them. The symptoms of irritation observed in the former class are convulsions, cramps, twitchings, erection of the penis, formication, and itching; diminution of temperature, wasting of the muscles, œdema, bed sores, and alkaline urine. In the second class all these symptoms are wanting, and the paraplegia is caused by the white or non-inflammatory softening, or is of the reflex kind; for this class *nux vomica* is particularly applicable, from the power it possesses of augmenting the amount of blood sent to the spinal cord and membranes, and, from the extra nutrition thereby derived, of increasing the vital properties of this nervous centre. —*Braithwaite* 43-26.

SARGENT'S ELIXIR CALISAYÆ FERRATUM.

This combination presents, in a new and permanent form, the important remedies, *Iron, Phosphorus, and Peruvian Bark*, united with aromatics.

Each tablespoonful represents 12 grains of the best *Calisaya Bark*, and contains in permanent solution $4\frac{1}{2}$ grains of the *Pyro-Phosphate of Iron*, forming an agreeable aromatic Elixir, entirely free from the repulsive inky taste and color peculiar to ordinary combinations of *Iron and Cinchona*. The aromatics appear to render it more acceptable to the stomach, and to adapt it better to enfeebled conditions of that organ, while they add to the tonic properties of the *Bark*.

SOLUTION CHLORIDE OF ZINC.

THE BEST AND CHEAPEST DISINFECTANT EVER KNOWN!

Always useful and perfectly harmless. Invaluable in every sick room.

A luxury in every House.

LIQUOR BISMUTHI.

A permanent Solution, containing 8 grains *Ter-Oxide of Bismuth* in each fluid ounce. Dose—one teaspoonful. Considered equivalent to an ordinary dose of the insoluble *Sub Nitrate*.

It is slightly alkaline, and it is miscible with water without precipitation.

Prepared by **E. H. SARGENT**, Manufacturing Pharmaceutist,
Corner of **Randolph and State Streets,**

CHICAGO, ILL.

Physicians supplied with all Articles of the best quality obtainable.

ARTIFICIAL LEGS FOR SOLDIERS. U. S. GOV. ARTIFICIAL LEG DEPOTS:



CHICAGO, ILL. ST. LOUIS, MO.
CINCINNATI, O. ROCHESTER, N.Y.
And 658 BROADWAY, NEW YORK,



WHERE the Government furnishes the U.S. Army and Navy Leg to Soldiers Gratis, or its value applied on the Anatomical Ball and Socket-Jointed Leg, which has lateral motion at the ankle, like the natural one.

DOUGLAS BLY, M.D., U.S. Commissioner.

For Instructions address Dr. BLY, at the nearest Depot. Citizens are furnished at the same Depots, on private account.

DR. MOTT ON ARTIFICIAL LEGS.

NEW YORK, FEBRUARY 10, 1860.

When the Palmer leg was invented, I recommended it to all who needed anything of the kind, because it was an improvement on the old Anglesia leg. And now I have the pleasure of informing them that Dr. Bly has invented a leg which is a great improvement on the Palmer leg. The advantages it possesses over the Palmer leg are:—

FIRST. The ankle-joint admits of motion not only antero-posteriorly, but laterally, which allows the wearer to walk on any grade, or on rough and uneven surface, without inconvenience.

SECOND. The ankle-joint is constructed without iron, steel, or metal of any kind; in fact, little or no metal is used in the limb, which renders it very light.

THIRD. The joints, instead of being bushed with buckskin, which requires a renewal at the hands of the maker, when worn, are adjustable, and under the control of the wearer.

FOURTH. The springs are made of India-rubber, and imitate more closely the action of the muscles.

FIFTH. The action of the springs can be increased or diminished at the option of the wearer, whereby each can adjust the motions of the leg to suit his own peculiar gait.

VALENTINE MOTT, M.D.

Éméritus Prof. of Surgery and Surgical Anatomy in the University of New York

R. R. BALL, GENERAL DRUGGIST, 119 South Clark Street, Chicago, Illinois,

DEALER IN

Pure Drugs, Fine Chemicals, Sugar Coated Pills, Solid Extracts,
Fluid Extracts, Dietetic Articles, Etc.,

Constantly in Store a Complete Assortment of all Articles of the

VEGETABLE MATERIA MEDICA,

Indigenous and Foreign,

Carefully Gathered, Packed, Ground, Pulverized, and otherwise prepared for Physicians' use.

WHOLESALE AGENT FOR

**W. S. MERRILL & Co.'s ESSENTIAL TINCTURES,
FLUID EXTRACTS, RESINOIDS, OTHER ACTIVE PRINCIPLES, AND
PHARMACEUTIC PREPARATIONS,**

Which will be Sold at Manufacturers' Prices.

Particular attention given to Physicians' Orders. Send for Circular and Catalogue.

CHICAGO MEDICAL COLLEGE.

Medical Department of Lind University.

The regular Annual Lecture Term in this Institution will commence on the second Monday in October, and continue until the first Tuesday in March following. Clinical Lectures *daily* throughout the term.

FACULTY.

J. S. JEWELL, M.D., Professor of Descriptive Anatomy.
 H. A. JOHNSON, M.D., Professor of Physiology and Histology.
 J. H. HOLLISTER, M.D., Professor of Materia Medica and Therapeutics.
 HENRY WING, M.D., Professor of General Pathology and Public Hygiene.
 F. MAHLA, Ph. D., Professor of Inorganic Chemistry.
 EDMUND ANDREWS, M.D., Professor of Principles and Practice of Surgery, and of Military Surgery.
 RALPH N. ISHAM, M.D., Professor of Surgical Anatomy and Operations of Surgery.
 W. H. BYFORD, M.D., Professor of Obstetrics and Diseases of Women and Children.
 N. S. DAVIS, M.D., Professor of Principles and Practice of Medicine, and of Clinical Medicine.
 F. MAHLA, Ph. D., Professor of Organic Chemistry and Toxicology.
 M. O. HEYDOCK, M.D., Professor of Medical Jurisprudence.
 J. S. JEWELL, M.D., Demonstrator of Anatomy.

FEES.

For the Winter Term, admitting to all the Lectures in the College,	\$50.00
Graduation Fee,	20.00
Matriculation Fee,	5.00
Dissecting Ticket,	5.00
Hospital Ticket,	6.00

The Summer Reading and Clinical Term commences on the second Tuesday in March, and continues until the first Tuesday in July; and is free to all matriculated students of the College. Boarding can be had for \$2.50 to \$3.50 per week. For further information, inquire of

E. ANDREWS, *Sec'y of the Faculty.*

THE MECHANICAL TREATMENT OF ANGULAR CURVATURE,

Or, POTT'S DISEASE OF THE SPINE.

By CHARLES FAYETTE TAYLOR, M.D., of New York.

THIS new method of Treatment, first brought before the Profession through the Transactions of the Medical Society of the State of New York, and attended with such marked success, is here offered in pamphlet form, convenient for transmission through the post. PRICE 35 CENTS.

BAILLIERE BROS., 520 BROADWAY, NEW YORK.

DR. EDWARD L. HOLMES,
28 NORTH CLARK ST., CHICAGO.

Special attention given to Diseases of the Eye and Ear.
 Referred, by permission, to the Editor of this Journal.